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Haverford College

Publication



CATALOG • 1970 - 72

Haverford College

“I SUGGEST that you preach truth and do righteousness as you have been taught, whereinsoever that teaching may commend itself to your consciences and your judgments. For your consciences and your judgments we have not sought to bind; and see you to it that no other institution, no political party, no social circle, no religious organization, no pet ambitions put such chains on you as would tempt you to sacrifice one iota of the moral freedom of your consciences or the intellectual freedom of your judgments.”

*President Isaac Sharpless,
Commencement, 1888*

STATEMENT OF PURPOSE FOR HAVERFORD COLLEGE

Haverford College seeks to prepare men for lives of service, responsibility, creativity, and joy, both during and after college.

The College shares with other liberal arts colleges of academic excellence:

- a commitment to open inquiry by both its students and faculty, combined with rigorous appraisal and use of the results of that inquiry
- an emphasis on a broad education in the natural and social sciences, the humanities, and the arts, combined with strong competence in at least one field of the student's choosing
- an educational program that aims more at preparing men to think and act clearly, boldly, and humanely in whatever life work they choose than at training for specific professional fields.

The College's distinctive character comes from its striving for:

- candor, simplicity, joy, and moral integrity in the whole of college life in keeping with Haverford's Quaker traditions
- a harmony for each man among his intellectual, physical, social, esthetic, and spiritual concerns
- a creative use of smallness that places students in the closest contact with dedicated scholars in the pursuit of knowledge
- a sense of community marked by a lasting concern of one person for another and by shared responsibilities for helping the College achieve its highest aims
- a system of responsible self-government in the student body and in the faculty
- a balance for students and faculty between disciplined involvement in the world of action and detachment to reflect on new and old knowledge alike.

In sum, the College seeks to be measured, above all, by the uses to which its students, graduates, and faculty put their knowledge, their humanity, their initiative, and their individuality.

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The contents of this catalog are designed to cover a two-year period, 1970-72. A supplement containing updated information will be issued in the fall of 1971. Additional current information is available at any time from the appropriate college office; please see the correspondence directory at the back of this catalog.

1970

	S	M	T	W	T	F	S
Sept.			1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30			
Oct.					1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31

	S	M	T	W	T	F	S
Nov.	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30					
Dec.			1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31		

1971

	S	M	T	W	T	F	S
Jan.						1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31						
Feb.		1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28						
Mar.		1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31			

	S	M	T	W	T	F	S
Apr.					1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	
May							1
	2	3	4	5	6	7	8
	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	31					
June			1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30			

College days in **BLACK**

Freshmen arrive	Tues. 8	
Other new students arrive	Thurs. 10	
New and re-entering students register for academic courses	Fri. 11	
Returning students arrive	Sat. 12	S
Opening Collection	8:00 p.m., Sun. 13	E
First Semester classes begin	8:00 a.m., Mon. 14	P
Upperclassmen register for non-academic courses	Mon. 14	T.
First faculty meeting	4:15 p.m., Mon. 14	
Fall term non-academic courses begin	Wed. 16	
Last day for changing courses	Mon. 28	
Last day for dropping a course without penalty	Mon. 12	O
Last day to request no-numerical-grade option (juniors and seniors)	Mon. 12	C
		T.
Fall term non-academic courses end	Fri. 20	
Swarthmore Day (no classes)	Sat. 21	N
Registration for Winter term non-academic courses	Mon. 23	O
Thanksgiving vacation begins	12:30 p.m., Wed. 25	V.
Classes resume and Winter term non-academic courses begin	8:00 a.m., Mon. 30	
Registration for Spring semester	Mon. 30 through Fri. 4	D
Midyear examination schedules due in Recorder's office	Mon., Tues. 7, 8	E
First semester classes end — Christmas vacation begins	11:30 a.m., Sat. 19	C.
Christmas vacation ends — Review period begins	8:00 a.m., Mon. 4	
All papers (except those in lieu of examinations) due by*	4:00 p.m., Wed. 6	
Midyear examinations	Thurs. 7 through Sat. 16	J
Papers in lieu of examinations (and laboratory notebooks)		A
due as scheduled by instructor, but not later than*	4:00 p.m., Wed. 13	N.
Midyear Recess	5:00 p.m., Sat. 16 to 8:00 a.m., Mon. 25	
Second semester classes begin	8:00 a.m., Mon. 25	
Last day for changing courses	Mon. 8	
Last day for dropping a course without penalty	Mon. 22	F
Last day to request no-numerical-grade option (juniors and seniors)	Mon. 22	E
Winter term non-academic courses end	Fri. 26	B.
Applications for Cope and Murray Graduate Fellowships		
due in President's office	Sat. 27	
Registration for Spring term non-academic courses	Mon. 1	M
Spring term non-academic courses begin	Mon. 8	A
Spring vacation	4:00 p.m., Thurs. 18 to 8:00 a.m., Mon. 29	R.
Sophomores' major registration cards due in		
Associate Dean's office	4:00 p.m., Fri. 9	A
Registration for Fall semester	Mon. 12 through Fri. 16	P
Applications for scholarships due in Admissions office	Wed. 14	R.
Final examination schedules and Registration for Fall semester		
due in Recorder's office	Mon. 19 through Fri. 23	
Prize competition manuscripts due in Recorder's office	4:00 p.m., Fri. 30	
Spring term non-academic courses end	Fri. 7	
Second semester classes end — Review period begins	11:30 a.m., Sat. 8	
All papers (except those in lieu of examinations) due by*	12:00 noon, Sat. 8	
Senior comprehensive examinations	Tues. 11 through Thurs. 13	
Final examinations for seniors	Wed. 12 through 12:00 noon, Wed. 19	M
Final examinations for all other students	Wed. 12 through Sat. 22	A
Papers in lieu of examinations (and laboratory notebooks)		Y
due as scheduled by instructor, but no later than*	4:00 p.m., Tues. 18	
Oral examinations for College honors	Mon., Tues., Wed. 17, 18, 19	
Final faculty meeting	9:00 a.m., Thurs. 20	
COMMENCEMENT	Tues. 25	

SPECIAL SATURDAY EVENTS

Parents' Day — Oct. 3 Homecoming Day — Nov. 14 Alumni Day — May 1

*For severe academic penalties applied to late papers and notebooks, see Page 62.



**FACULTY
AND
ADMINISTRATION**



FACULTY

JOHN R. COLEMAN *President*
 B.A., University of Toronto; M.A., and Ph.D., University of Chicago; LL.D.,
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EMERITI

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***On leave of absence, 1970-71.

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***On sabbatical leave, 1970-71.

****On leave of absence 1970-71.

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***On sabbatical leave, 1970-71.

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- ANDRZEJ ZABLUDOWSKI *Assistant Professor of Philosophy*
on the Sloan Foundation Grant
M.A. and Ph.D., University of Warsaw.

LECTURERS AND INSTRUCTORS

- PETER ATWOOD *Instructor in Mathematics*
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D.Mus., Combs College of Music.
- DAVID L. ELDER† *Lecturer*
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†On appointment for first semester, 1970-71.

††On appointment for second semester, 1970-71.

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SPECIAL APPOINTMENTS

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THOMAS DAVIS*Assistant in the Science Division*

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Cellist, Philadelphia Orchestra; Member, De Pasquale Quartet.

JOSEPH DE PASQUALE*Member of the Resident Chamber Music Group*
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ROBERT DE PASQUALE*Member of the Resident Chamber Music Group*
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A.B., Mount Holyoke College.

LOUISE G. ONORATO*Laboratory Instructor in Biology*
B.S., Wilkes College; M.S., Temple University.

RUDOLPH TOLBERT*Community Organization Coordinator,*
Center for Nonviolent Conflict Resolution

JAMES L. VAUGHAN*Director of Counseling Services*
B.A., Earlham College; B.D., Yale Divinity School; M.S. Yale University.

†On appointment for first semester, 1970-71.

JANE WIDSETH *Counselor*
 B.A., University of Minnesota; M.A., Boston University.

APPOINTMENTS UNDER SPECIAL GRANTS

CATHERINE L. BUSCH *Research Assistant in Physics*
 B.S., University of Pennsylvania.

MABEL M. CHEN *Research Associate in Astronomy*
 B.S., The National Taiwan University; M.A. and Ph.D., Bryn Mawr College.

LINDA J. DILWORTH *Research Assistant in Biology*

CAROL C. HELLER *Research Assistant in Biology*
 B.A., Wilson College.

ELEANOR K. KOLCHIN *Research Associate in Astronomy*
 B.A., Brooklyn College.

CECILY D. LITTLETON *Research Associate in Astronomy*
 B.A. and B.Sc., Oxford University.

PATRICIA MARKER *Research Assistant in Biology*

SLAVICA S. MATAČIĆ *Research Associate in Biology*
 M.S. and Ph.D., University of Zagreb.

SARA SHANE *Research Assistant in Biology*
 B.A., Swarthmore College.

ALLEN G. SHENSTONE *Research Associate in Astronomy*
 B.S., M.A. and Ph.D., Princeton University; B.A. and M.A., Cambridge University.

HARRIET STONE *Research Assistant in Biology*
 B.A., Antioch College.

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 Temple University Technical Institute.

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Nonviolent Conflict Resolution
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B.A., Haverford College.

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- WILLIAM W. LANDER*Physician*
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- PETER G. BENNETT*Psychiatrist*
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LOUISE ANASTASI*Head Nurse*
R.N., Philadelphia General Hospital; B.S.N., Hunter College.

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B.A., Whittier College; M.A., Haverford College; Ph.D., University of Pennsylvania.

BARBARA L. CURTIS*Cataloger, Quaker Collection*
B.A., Bryn Mawr College; M.A.T., Radcliffe College; M.S. (L.S.), Drexel University.

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B.A., William Penn College; M.A., Haverford College; B.D., Drake University; M.S. (L.S.), Drexel University.

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B.A., Radcliffe College; M.S. (L.S.), Drexel University.

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ACADEMIC COUNCIL

The Academic Council consists of the President as chairman; the Provost; the Associate Dean as executive secretary; three elected divisional representatives of the faculty, one to be elected yearly; and the two faculty representatives to the Board. The Academic Council: 1) appoints the standing faculty committees, 2) makes recommendations to the President on faculty appointments, reappointments, promotions, and tenure in accordance with accepted procedures, and 3) may consider matters having college-wide academic implications which are referred to it by the President and/or by members of the Council. The elected members of the Academic Council for the academic year beginning September 1, 1970 are Mr. Glickman (Social Sciences), Mr. Santer (Natural Sciences), and Mr. Kosman (Humanities).

STANDING COMMITTEES OF THE FACULTY

(The President and Provost are ex-officio members of all committees)

Administrative Advisory: MARCEL GUTWIRTH, *Chairman*
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JOHN MCKENNA, DOUGLAS MILLER

Inter-College Cooperation: LINDA GERSTEIN, *Chairman*
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**THE
COLLEGE
AND ITS
PROGRAM**



PURPOSE

Haverford College is dedicated to academic excellence — created in an environment of concern for the growth of individuals within the College community.

The College places strong emphasis upon a rigorous academic program. That program is flexible in form and content to meet the needs of individual students, but this flexibility assumes that the men of ability who come here will use their ability to the highest degree.

Our faculty is noted above all for its strength in teaching. These men and women are scholars who love their work and expect to transmit to students their enthusiasm and high standards in their respective fields. They are teaching at a small liberal arts college as an opportunity for creative interchange with individual students. They expect much from themselves and their students; they expect to learn as well as to teach in this close relationship with undergraduates.

We aim to utilize the full resources of the College, in and out of the classroom, to promote the personal and intellectual growth of our students. Through an ambitious program of visiting lecturers, through arts and cultural activities, through self-government and service programs, through a student-centered athletic program, and through day-to-day living on campus, we stress each man's development. We ask our students to give of themselves, even as they draw new strengths from others. The classroom and the extra-curricular world are, for us, inseparable parts of the educational environment. And we seek excellence throughout that entire environment.

We strive to create an atmosphere in which personal and intellectual integrity, honesty, and concern for others are dominant forces. We expect every student who studies with us to adhere to the Honor Code as it is adopted each year by the Students' Association. That code is a way of life at Haverford. The College does not have as many formal rules as most other colleges; what it has instead is something more demanding — a set of expectations about how men will govern their affairs and conduct themselves so as to show respect and concern for others around them. We welcome students' participation in making the College still better in the future. We expect our students to contribute responsibly and considerably, individually and collectively, in the task of fashioning new programs that let us achieve our core aims of academic excellence in a humane and stimulating atmosphere.

Haverford College has strong Quaker roots. The continuing influence of the Religious Society of Friends shows most clearly in our emphasis

on the interplay of the individual and the community, our concern for the uses to which men put their expanding knowledge, and our interest in educating ethical human beings and leaders. No religious activities are compulsory, and admission is open to men of all faiths. A weekly meeting on Thursday mornings (Fifth Day) is a visible sign of our communal searching, through both silence and the spoken word, for the principles by which able men can lead moral lives.

HISTORY

Founded in 1833, Haverford was the first college established in the United States by members of the Society of Friends. Our founders said they wanted to provide an "enlarged and liberal system of instruction" to meet the intellectual needs of "Friends on this continent." They predicted that their course of instruction in science, mathematics and classical languages would be "as extensive as given in any literary institution in this country."

And so it has been.

They built their new school (one solid, stone structure at first) in the center of the rolling farmland west of Philadelphia — in the Welsh Tract, a large area originally set aside by William Penn for Quaker immigrants from Wales. A British gardener was brought over to landscape the grounds. His work remains today on Haverford's beautiful 216-acre campus. At first the new institution, called Haverford School, was open only to Quakers. In 1847 non-Quakers were admitted. In 1856 the school became Haverford College — a degree-granting institution.

LOCATION

Geographically, we're right where our founders put us. But the area has changed considerably since 1833. Today, Haverford is in the heart of Philadelphia's verdant Main Line suburbs, just 10 miles west of the city. Center-city, with its urban advantages and challenges, is only 20 minutes away. The area offers extensive cultural, scientific, commercial, and industrial facilities. Within a half-hour drive from our campus there are some 20 other colleges and universities. Transportation is good. The Penn-Central Railroad's Haverford station is a brief walk from our campus. For auto traffic, we front on U. S. Route 30, Lancaster Pike, just a few miles south of the Pennsylvania Turnpike. By train, we're two hours from New York City and three hours from

Washington. Philadelphia International Airport is a half-hour expressway drive.

Yet the campus remains the park-like, peaceful, natural setting that the first students found in 1833. The years have only matured the plantings and increased the beauty. We have improved things here and there. Our Edward Woolman Arboretum and Nature Walk, combining beauty and botany, for example, was created by an alumnus of the class of 1893 who initiated the project with a generous donation, spent some 15 of his last years working on the walk — often with his own hands — and then left a bequest to finish the job.

RESOURCES

LIBRARY: The library was planned and developed to provide intellectual resources needed to sustain our academic curriculum. Over the years, the faculty has selected the majority of the volumes. Most books are on open shelves accessible to students for almost 100 hours each week during the college year.

Through special collections we provide opportunities for independent research in several fields, notably Quaker history. Independent study in the social sciences is aided by our Government Depository and International Documents Collections. And there are other collections of manuscripts, orientalia and Renaissance literature. These special collections are described later in this section.

The library currently holds about 280,000 volumes and receives some 1,800 periodicals and serials. It is an academic library, planned and operated for our students and faculty; but alumni and members of the Library Associates also are welcome guests.

The library building was constructed in several stages. The first portion of the Thomas Wistar Brown Library was built in 1864. Successive additions were made; and in 1968 we constructed the large, connected James P. Magill Library, named for a member of the class of 1907. As part of the Magill Library project, the older adjoining structure was thoroughly renovated and air-conditioned.

The library now has about 73,000 sq. ft. of floor space, six levels, shelf space for 500,000 volumes, seating capacity for 500 persons, and a fire-proof vault, with controlled temperature and humidity, for rare books and manuscripts. There are 260 study carrels. Thirty are enclosed and reserved for faculty, and the rest are for students. Of those, 24 are soundproof for students who want to use typewriters in the library. Special reading and work areas include the following:

The Borton Wing, named for Hugh Borton, class of 1926, former president of Haverford College, contains the **Harvey Peace Research Room** and the vault for rare books and manuscripts.

The Crawford Mezzanine provides writing and study tables for 44 students. It honors Alfred R. Crawford, class of 1931, former vice president of the college.

The Gummere-Morley Room, a browsing room, is in memory of Professors F. B. Gummere, class of 1872, and Frank Morley, Sr.

The Hires Room, named for Harrison Hires, class of 1910, and Mrs. Hires, is an audio room offering both discs and tapes.

The Rufus M. Jones Study, a reconstruction of a room in Rufus Jones's home, contains his books and furniture. Jones, a noted Quaker philosopher, Haverford alumnus and teacher (class of 1885), spent almost 50 years on our campus.

The Microforms Room is equipped with microfilm, microfiche, and microcard readers plus microfilm files of *The New York Times*, the *Philadelphia Public Ledger* and *Landmarks of Science*.

The Christopher Morley Alcove serves as a browsing area and contains exhibits and collections of the writings of Christopher Morley, a member of the class of 1910.

The C. Christopher Morris Cricket Library and Collection is a handsome room housing material on the history of American cricket, with special emphasis on the sport at Haverford College and in the Philadelphia area.

The Philips Wing was renovated in 1952 and named in honor of one of our principal benefactors, William Pyle Philips, class of 1902. Plans call for use of this wing as a special reading room for semi-rare books and periodicals.

The Sharpless Gallery was named in honor of Isaac Sharpless, president of Haverford from 1887 to 1917, and furnished by the class of 1917. A selection of the college's paintings hangs there.

The Strawbridge Seminar Room is used for seminars and committee meetings.

The Treasure Room, provided through the generosity of Morris E. Leeds, class of 1888 and a former chairman of the board of managers, contains part of the Quaker Collection. Staff offices and research

facilities for visiting scholars are provided in the Treasure Room and Borton Wing.

Special libraries are maintained in Stokes Hall for chemistry, physics, and mathematics; in Sharpless Hall for biology; in the Drinker Music Center for music; and in Hilles Laboratory for engineering.

We have nine major special collections: The Quaker Collection, the Tobias Collection of the Writings of Rufus M. Jones, the Rufus M. Jones Collection on Mysticism, the Charles Roberts Autograph Letter Collection, the French Drama of the Romantic Period Collection, the Christopher Morley Collection of Autographed Letters, the William Pyle Philips Collection, the Harris Collection of Ancient and Oriental Manuscripts, and the Lockwood Collection of Works on the Renaissance.

The Quaker Collection began in 1867 when the board of managers decided to gather "an important reference library, especially for works and manuscripts relating to our own Religious Society." At that time, the library already contained many Quaker books and manuscripts, including the "Letters and Papers of William Penn."

Today, The Quaker Collection is a major repository for both printed and manuscript material about the Society of Friends. Its 25,000 books include more than 4,000 volumes printed before 1700. The nucleus of these early works is the William H. Jenks Collection of Friends Tracts, containing 1,600 separately bound titles, mostly from the 17th century.

There are several thousand pamphlets and serials in our nearly complete set of bound volumes of Quaker periodicals. In addition, we have a magnificent collection of Yearly Meeting minutes. The Quaker Collection's 86,000 manuscripts, documents, maps and pictures include the journals of about 700 important Friends, the papers of leading Quaker families, Meeting records, archives of Quaker organizations, and material on Friends' relationships with Indians.

Through gifts and purchases, we add to The Quaker Collection constantly. We especially welcome gifts of family papers, books and other material related to the history of Friends. On request, the librarian will send a brochure giving more information on The Quaker Collection.

The Rufus M. Jones Collection contains 1,360 books and pamphlets on mysticism published between the 15th century and the present.

The Tobias Collection includes practically the complete writings of Quaker philosopher Rufus Jones. There are 325 separate volumes and eight boxes of pamphlets and extracts. Jones' personal papers, also kept at Haverford, generally are available to scholars.

The Roberts Collection contains more than 20,000 manuscript items such as a complete set of the signers of the Declaration of Independence and letters of famous authors, statesmen, educators, artists, scientists, ecclesiastics and monarchs. It also includes valuable papers on religious, political and military history.

The French Drama Collection was given to the College by William Maul Measey. It consists of several hundred popular plays produced in Paris between 1790 and 1850.

The Morley Collection comprises about 1,000 letters and memoranda selected by the late author, Christopher Morley, from his correspondence files. There are autographed letters from more than 100 contemporary authors. Morley was born on our campus.

The Philips Collection primarily consists of rare books and manuscripts, mostly of the Renaissance period. Among the Philips treasures are first editions of Dante, Copernicus, Spenser, the King James Bible, Milton, Newton and the four folios of Shakespeare.

The Harris Collection has more than 60 Hebrew, Latin, Arabic, Syriac and Ethiopian rolls and codices collected by J. Rendel Harris.

The Lockwood Collection consists of some 3,000 volumes of works on the Renaissance gathered and given to us by Dean P. Lockwood, librarian from 1920 to 1949.

The offerings of our library are widened by affiliations. For example, we maintain a cooperative arrangement with nearby Bryn Mawr and Swarthmore colleges. The library facilities of each college are open to faculty and students of all three schools. The Philadelphia Bibliographical Center and Union Library Catalogue — the largest regional cooperative catalog in America — enables users of our library to locate books in more than 200 Philadelphia-area libraries.

ACADEMIC BUILDINGS: The one solid, stone structure we started with in 1833 cost \$19,251.40. It's still here. Now it is called Founders Hall, but for years it was just known as "The College." Today, it houses mostly administration and faculty offices. Since Founders Hall went up, more than 20 major buildings and over 35 lesser structures have been constructed on campus. Most are shown on the campus map at the rear of this catalog. Many are the homes of faculty members, most of whom live on or near the campus.

The major classroom and laboratory buildings are Chase Hall, the

Hilles Laboratory of Applied Sciences, the Strawbridge Memorial Observatory, the Henry S. Drinker Music Center, Stokes Hall, Sharpless Hall, the Lyman Beecher Hall Building and Yarnall House.

Hilles houses the computing center and the business office.

Stokes is the home of the physics, chemistry, and mathematics departments. It has classrooms, laboratories, offices, a 205-seat auditorium, and our science library with space for 20,000 volumes.

Sharpless contains the biology and psychology departments—mainly classrooms, offices and laboratories.

Hall Building contains an African-studies room as well as a permanent display of primitive art. It also houses classrooms and offices.

Drinker houses the music department, record collection, music library, practice facilities, classrooms, and offices.

Yarnall House is the temporary quarters of our Center for Non-violent Resolution of Conflict.

SCIENCE FACILITIES: We are equipped for teaching and research in modern nuclear and atomic **physics**. There are six general physics laboratories for course work, seven specialized laboratories for student-faculty research, and two rooms used exclusively by seniors for their major projects. Our physics equipment includes: an X-ray unit for powder diffraction work, a subcritical reactor containing 2.5 tons of uranium, a doubly shielded room for work with electromagnetic radiation, lasers, multi-channel pulse-height analyzers, a PDP-9 computer, and equipment for the study of low-temperature phenomena down to 1°K.

Our **chemistry** facilities enable students to use sophisticated instrumentation extensively at all levels of study. There are five laboratories for course work, an instrument room, specialized-equipment rooms, and six laboratories in which students conduct research projects jointly with the faculty. Chemistry equipment available for routine use by students includes: a Varian A 60 nuclear magnetic resonance spectrometer; a C. E. C. 21-620 mass spectrometer; a Packard Tri-Carb liquid scintillation spectrometer for use in radioactive tracer studies; a Hitachi-Perkin-Elmer visible and ultra-violet scanning spectrophotometer; two F. & M. research gas chromatographs, one of which has a flame ionization detector, and a Wang 700 B programmable electronic calculator. The X-ray laboratory is outfitted with a Picker multifocus

X-ray generator, an Enraf-Nonius integrating precession camera, and associated apparatus which students can use in their projects to determine molecular structures. In addition to these major items, there are simpler spectrophotometers and simpler apparatus for work with radioactive tracers. The physical-chemistry laboratory equipment includes a Bausch and Lomb grating spectrograph, six high-vacuum systems, bomb and microcalorimeters, and a variety of high precision electrical and electronic apparatus. Mettler single-pan balances and ground-joint glassware are used in all instructional laboratories. We have a glass-blowing shop and a science-division machine shop.

Grants from the National Science Foundation may be available to our chemistry students who wish to participate in summer research projects at Haverford.

Haverford is well equipped for the study of modern molecular **biology**. In Sharpless Hall, two of the floors devoted to biology house a large freshman-sophomore laboratory and a junior laboratory equipped to handle all aspects of cell biology. One of these floors also has animal rooms and shops for glass-blowing, woodworking and metalworking. The third biology floor is where senior students work with their professors on joint research projects. That floor has several constant-temperature rooms, ultracentrifuges, a high-resolution electron microscope, spectrophotometers, liquid scintillation counters, and an automatic amino-acid analyzer.

Psychology has the top two floors of Sharpless Hall, containing animal quarters, an animal laboratory with sound-proofed and electronically controlled experimental rooms, a set of individual animal- and human-research rooms, a perception laboratory, a social-personality observation laboratory with one-way mirrors, and a shop. All the laboratory rooms are wired to a central control panel, permitting us to create complex communication and control patterns. We also have a physiological-psychology room for animal work.

The **Observatory** contains: a 10-inch, f/15 refractor; several smaller telescopes; a meridian circle; a zenith telescope; a spectroheliograph; an astrographic mounting with two 4-inch f/7 cameras, one corrected for blue wave lengths, the other corrected for red; and a 4-inch guide telescope; a Grant comparator with x- and y-traverse and automatic position and density recording; various smaller instruments and our astronomical library of some 3,000 bound volumes.

COMPUTING CENTER: With Bryn Mawr and Swarthmore colleges, we maintain on campus an \$800,000 computing center used mainly for

student instruction and for faculty and student research. Smaller computers on the three affiliated campuses handle simple local tasks, while referring more ambitious computing projects to the main equipment at Haverford.

The main unit, an IBM System/360 Model 44, has two memory units: a high-speed unit with a memory of 32,768 words and a reading speed of one million words per second, and a slow-speed unit with a memory of almost five million words and a reading speed of 39,000 words per second. Our second, smaller computer is a PDP-8/I unit manufactured by the Digital Equipment Corporation. This unit links the equipment at the other two colleges to our main computer. The PDP-8/I is connected by remote terminals to laboratories, offices and classrooms on our campus and to other schools in the area. We also have several key punches, a sorter, a reproducer, a tabulator and other equipment.

All computing equipment may be used by students. In addition to the usual scientific applications, our computing center also is used for work in the social sciences, the arts and humanities. A committee, with faculty and student members from all three campuses, supervises the computing center. Students serve on the center's operating staff.

RESIDENCE HALLS: As an integral part of our educational philosophy, we encourage students to become as involved as possible in our community life. Normally we expect students to live on campus — except for married students and those living at home. Freshmen are assigned the rooms available after the other classes have made their choices; new students are notified of their housing assignments before they arrive on campus in September.

We expect students to treat college property with care; we hold a student financially responsible for any damage to his room.

About 95 per cent of the students live on campus — mostly in suites with two, three, four or six private bed-study rooms adjoining a common living room. **Barclay Hall** houses 100 men in two-man suites, single rooms and double rooms. **Lloyd Hall** has mostly six-man suites, although there are a few two-man suites; total occupancy is 108 men. **Leeds Hall**, with 52 men, has both four-man suites and single rooms. **Gummere Hall** has two-, three-, and four-man suites plus some single rooms — 129 places altogether. **Jones and Comfort Halls** each house 61 students in three- and four-man suites plus some single rooms; each hall has a suite for visiting scholars. **Lunt Hall**, with three- and four-

man suites and single rooms, holds 63 students. **Williams House**, for Spanish-speaking students, accommodates seven men. **French House** contains a faculty apartment and student quarters for 13 men; and 15 men are quartered in "**710**" **House**.

With the exception of Barclay, all residence halls are either fairly new or completely renovated. Renovation of Barclay is scheduled for completion in 1971.

OTHER BUILDINGS: The offices of the president, provost and admissions director are in **Roberts Hall**, a columned building that also contains a 700-seat auditorium. The dean of students, associate dean of the college, recorder, development office, alumni office and public relations office are in **Founders Hall**. The business office is in **Hilles**; and the **Union** building houses the bookstore, snack bar, student lounges, and the college radio station WHRC.

The ten-bed **Morris Infirmary** contains a clinic, an emergency treatment room, an acute-care unit, and an isolation unit for contagious diseases. It has its own kitchen and quarters for resident nurses.

We opened a new **dining center** in 1969.

ART COLLECTION: Haverford's small permanent art collection includes paintings and drawings by Homer, Hurd, Inness, Peale, Sargent and Whistler. From time to time, there are also temporary exhibitions of paintings, drawings and photographs on campus. At the beginning of each semester, we lend students framed reproductions of outstanding works of art to hang in their rooms. We also lend a few originals.

MUSIC: The music library contains a large collection of music scores, including the complete works of several composers. Our record collection, started with a Carnegie Corporation gift, is used for teaching and study. There are nine practice pianos and an electric practice organ on campus. In Roberts Hall, where larger concerts are held, there are a Steinway grand piano and a Schlicker pipe organ. Professional concerts add much to the college year.

ATHLETIC FACILITIES: The **gymnasium**, the **Alumni Field House** and our other athletic facilities are described later in the section on physical education.

ADMISSION

The policy of Haverford College is to admit to the freshman class those applicants who, in the opinion of the College, are best qualified to profit by the opportunities which Haverford offers and at the same time to contribute to undergraduate life. Due regard is given not only to scholarly attainment, as shown by school record and examination, but also to character and personality, plus interest and ability in extracurricular activities. Applicants compete for admission to a carefully selected and comparatively small student body — no more than 700 men.

A candidate's preparatory course should include a minimum of: four years of English; three years of mathematics, including two years of algebra; three years of one foreign language, in preference to two years in each of two languages; a laboratory science; and a year in history or social studies. The candidate's personal interests dictate what additional secondary-school courses he takes in foreign language, mathematics, science, social studies and history. Most candidates will have taken honors, enriched or advanced-placement courses if offered in their school.

Each applicant must take the Scholastic Aptitude Test and three achievement tests of the College Entrance Examination Board before February of his senior year. The English Composition Test is required as one of those three achievement tests; but the candidate may choose any other two tests he wants.

The applicant is responsible for completing all arrangements to take the tests and to have the scores reported directly to Haverford. Information about them may be obtained from his school guidance officer or from the College Entrance Examination Board, Box 592, Princeton, N.J. 08540.

A candidate for freshman admission should apply early in the senior year. His application should be accompanied by a check or money order for \$15, drawn to the order of *Haverford College*. This application fee is not refundable. The deadline for receipt of freshman applications is January 31; all supporting credentials must be received by February 15. We begin reviewing applications in January, and complete our decisions in early April. Applicants will be notified by mid-April.

We hope the candidate will visit the campus because a visit is the best way he can learn about Haverford. Student-guided tours of the campus and interviews with a member of the admissions staff should be scheduled in advance with the admissions office. The telephone

number is (215) 649-9600, ext. 223; the mailing address is Haverford College, Haverford, Pennsylvania 19041.

The admissions office is open from 9:30 a.m. to 4 p.m. on Mondays to Fridays. During the school year it is also open from 9 a.m. to noon on Saturdays. The admissions staff is not available to interview candidates in February and March, when decisions are being made.

Haverford alumni in various sections of the country have volunteered to meet prospective candidates and to give first-hand information about us. Their names and addresses can be found toward the rear of this catalog under "Alumni Representatives."

EARLY-DECISION: We offer an early-decision plan for candidates whose first choice is Haverford. Early-decision candidates must take the required College Board examinations in their junior year of secondary school. We must have their application before November 1 of their senior year.

TRANSFER STUDENTS: Haverford College admits a small number of transfer students each year. In addition to filing his application, a transfer candidate must submit a secondary-school transcript on our form, the results of his College Board examinations, a college transcript, and a letter of recommendation from a responsible official of the college that he is attending. The application deadline is May 1; decisions are usually announced in June.

ADVANCED STANDING: If a student is qualified, he may be permitted to omit one of the introductory courses — proceeding directly to work at the intermediate level in that subject. Some departments give placement examinations to determine a student's qualifications; other departments are less formal.

Students who have taken high-school courses under the Advanced Placement Program may take the tests in these subjects given by the College Entrance Examination Board each May. If a student does well on these tests, we may give him advanced placement, or college credit, or both.

We also may grant credit for work a student does at another college before he enters Haverford. To be considered for such credit, the student must arrange to have the transcript of that work sent to us. Under our Flexibility Program, a student can make special use of such credits.

EXPENSES

We consider a regular student to be one who takes four or more courses in a given semester, or who has been granted permission under the Flexibility Program to carry fewer courses.

The tuition charge for all regular students is now \$2,325 for the academic year. For special students, tuition is currently \$350 per course, per semester. The residence fee is \$1,300. There is also a unit fee of \$175 per year.

These fees—tuition, residence and unit—total \$3,800 per year. We expect rising costs will force an increase for the academic year beginning in September, 1971.

The residence fee covers board-and-room charges when college is in session. This includes: heat; electric light; weekly housekeeping service; and the use of bedroom furniture, including bureau, table, chair, and a bed (the linen for which is furnished and laundered by the College). We ask students to supply any other furniture they want, plus blankets and towels.

The unit fee covers the following: student activities fee: admission to the art series (entertainment and cultural events); laboratory fees; health fee; accident insurance (a maximum of \$1000 within one year of each accident); psychological tests when we require them; and a diploma.

We have four scheduled vacation recesses during the school year: Thanksgiving, Christmas, midyear recess, and spring vacation. With minor exceptions, student services and facilities and academic facilities are closed or drastically curtailed during vacation periods. An extra room-charge of \$3 per day is made for students remaining on campus during the Christmas or spring vacations.

We also require a \$150 deposit, payable in full before the beginning of the first semester, to cover the cost of books and any other incidental charges that may arise during the school year. On January 15 this deposit is brought up to \$150 by billing the student for charges already made against it. Each student's deposit account must have a balance, on May 15, adequate to cover all final charges. If this bill, or any other indebtedness, is not paid by the end of the semester, we withhold credits for the work performed. Any unspent balance is refunded at the end of the academic year.

Bills are rendered August 15 and January 15 for the following semester's tuition, board, room, unit fee, and deposit. They must be paid in full before the beginning of the semester. To avoid last minute

congestion, we ask that bills be paid by mail in advance. If the fees are not paid, we won't consider the student as enrolled at the college.

When a student requires a special diet for medical reasons, and this is approved by our physician, we make a charge of \$8 weekly. This charge may be larger if the special foods are unusually expensive.

We charge freshmen \$35 to cover the cost of their orientation week, called *customs week*. (New students who are not freshmen come for the last portion of customs week and are charged a fee of \$20).

A student's official transcript normally will not be sent until all outstanding charges — fees, books, library fines and other incidental charges — have been paid.

We do not make a reduction or refund of the tuition charge after the first two weeks of any semester; but if a student withdraws before the completion of the first two weeks, we'll make a complete refund of his tuition. In case of withdrawal or absence because of illness, a full refund of the room-and-board fee cannot be made because overhead expenses continue. However, if a student withdraws more than four weeks before the end of a semester, or is absent because of illness for four weeks or more, we'll make a partial refund of the room-and-board fee in the amount of \$20 for each week of absence. We do not refund the unit fee for any reason.

COLLEGE RESPONSIBILITY: The college is not responsible for loss because of fire, theft, or any other cause. Students who want fire insurance can get information at the business office.

MONTHLY PAYMENTS: Students who prefer to pay tuition and other fees in monthly instalments may do so through the Bryn Mawr Trust Company. Details of this plan, including charges of financing, may be obtained from our business office.

FINANCIAL AID

For its size, Haverford traditionally has had comparatively large endowment and trust funds. The income from these investments, plus annual gifts from alumni and other friends, allow us to maintain high educational standards and to underwrite a substantial financial-aid program at the same time. But it costs increasingly more to provide a quality, liberal education. The body of knowledge expands; new programs are required; expenses in general mount; and we constantly seek new endowments and trusts.

In total, it costs about \$8,500 per year to give one student a Haverford education with its low student-faculty ratio, its individual instruction by highly qualified teachers and its modern laboratory and library facilities. Fortunately, the student is never required to pay the full cost. Our endowment and other funds underwrite a large portion of the expense. As a result, each student, whether he receives formal financial aid or not, starts out at Haverford with about 55 per cent of the total costs of this education paid. Through his tuition and other fees, the student pays the remaining 45 per cent.

The college has many ways to help students who can't meet their expenses. More than 35 per cent of our students receive formal financial aid from the college, and another 10 per cent receive financial aid from other sources. In short, more than 45 per cent of our students get financial help — almost half the student body.

We emphasize that no able student who is seriously interested in Haverford should hesitate to apply because of financial reasons.

The financial aid program—which includes scholarships, loans, and jobs — is administered by a committee composed of the director of admissions as chairman, the associate dean and the dean of students. Aid is awarded on the basis of merit and need. Although no aid is awarded for more than one year, it is our practice to continue a student's aid if his academic and personal record is satisfactory and his need continues.

Aid is not granted to a student whose previous college bill has not been paid in full.

New students requesting aid must file a Parents Confidential Statement with the College Scholarship Service at the appropriate CSS office before January 15th. The applicant can get the CSS form from his school guidance officer or directly from CSS at Box 176, Princeton, N.J. 18540.

Students who are enrolled at the college and who need aid must file applications with the director of admissions before April 15.

Further details about financial aid may be obtained from the director of admissions.

PLACEMENT SERVICE

We have a modest but effective placement service. The alumni office maintains current information on jobs open in business, government and institutions. We arrange for personnel recruiters to interview our students — at the student's request.

CURRICULUM

Haverford is a liberal arts college. Its curriculum is designed to develop in its students the capacity to learn and to understand, to make sound and thoughtful judgments. The requirements for the degree encourage the exercise of these skills in each of the broad fields of human knowledge, and a fuller development of them in a single field of concentration.

GUIDELINES FOR LIBERAL EDUCATION

In its original meaning "liberal" was applied to those arts and sciences that were considered worthy of a free man, as opposed to "servile" or "mechanical" disciplines. "Liberal education" has persisted as an ideal which is not only worthy of a free man but is the means of liberating and freeing man by providing him with an understanding and appreciation of the tradition that has shaped him and the social and natural world in which he lives.

The purpose of these guidelines is to help the student in planning a course of study at Haverford. The student should realize that there are many different types of educational experiences that can take place at an institution such as Haverford. Each student has a great deal of freedom and responsibility in planning his course of study at Haverford. It is expected that, with the help of his adviser, a course of study will be planned which will be designed to meet the individual's particular interests, educational background, and intellectual strengths and weaknesses. While there are disagreements about everything that a liberal education ought to include, there is a consensus concerning its general shape.

1. Written and oral communication. One of the most difficult and important skills is the art of writing and speaking lucidly and coherently. A student will discover that there are few areas of human knowledge that he can explore in depth unless he has perfected his ability to write and speak effectively. These skills will be stressed in the program of Freshman Seminars. A student who is weak in the skills of verbal communication is well advised to take courses which pay greater attention to training in this art.

2. Foreign language. The mastery of a foreign language, ancient or modern, can not only deepen the student's appreciation of his own language but can increase his sensitivity and understanding of the nature of language and can enable him to gain a far more intimate understanding of different cultures. Since many Haverford students continue their education in graduate school, a student ought to know that many gradu-

ate programs require a reading knowledge of at least two foreign languages.

At present all students are required to take at least one year of foreign language study at Haverford unless they can satisfy their language requirement by examination. But a student who starts the study of a foreign language at Haverford should realize that a single year of study is insufficient to achieve minimal competence in reading or speaking. While not required, all students are strongly advised to plan to take two or more years of formal language study.

3. Mathematics. One remarkable feature of contemporary intellectual evolution is the diverse ways in which almost all areas of human knowledge have been influenced by the development and application of mathematics. Increasingly, mathematics is having an important effect on many areas of the humanities and social sciences. It is becoming a language and a tool needed for serious inquiry and understanding of almost any area of human knowledge.

4. Humanities, social sciences, and natural sciences. The student should realize that this division of the areas of human knowledge is a relatively recent development. Some fields that are now considered parts of the social sciences were once considered to belong to the humanities, just as the natural sciences were once considered parts of natural philosophy. A primary reason for distinguishing these divisions is that they do exhibit different emphases, approaches, techniques, basic concepts, and problems. It is expected that every student at Haverford will acquire elementary acquaintance with the distinctive approaches, concepts, and contributions represented by the humanities, social sciences, and natural sciences. This does not mean that students *must* gain a survey knowledge of these three areas. Rather, it is expected that every student will be able to write and speak effectively about some aspect of these areas which will display his appreciation for distinctive approaches represented by these areas of human knowledge.

In planning his course of study a student should keep these aims in mind. Normally students may achieve these aims by taking courses from the three divisions of the College. But simply receiving a passing grade in a course is not necessarily sufficient, of itself, to achieve this basic mastery. A student should view his courses as only one means for achieving the mastery expected by the College; he should take advantage of other educational means to achieve a knowledge of the humanities, social sciences, and natural sciences.

FRESHMAN PROGRAM

Each freshman, on entering the College, selects a Freshman Seminar. In most cases the teacher of that seminar will also be the student's adviser. A tentative selection of courses is accomplished by the freshman and his adviser during the orientation (Customs) week. Every effort is made by the adviser and others (including the Associate Dean, the Dean of Students, his assistant, the counselors, admissions officers, and Customs men) to facilitate mutual adaptation between the freshman and the College. It is anticipated that freshmen will "try out" a variety of courses in the first few days of classes and that considerable course shifting will occur. A series of standard tests is administered to all entrants within the first few days of the first semester. These tests are helpful in guidance and counseling.

The freshman will be helped to plan a course of study for his first four semesters, taking into account the "Guidelines for Liberal Education."

During the spring of his freshman year he will participate in an inquiry intended to help him evaluate his progress and program (see below).

Freshman Seminars

The program of Freshman Seminars is intended to give the student an exciting and unique educational experience at the very beginning of his college education. While it is generally accepted that students should have the chance to experiment with interdepartmental seminars and individual projects at an advanced level, the freshman seminar program is designed to make these opportunities available to the freshman.

Freshman Seminars are not intended to be formal introductions to the various departments of the College. They are taught by members of all divisions of the College, and have interdisciplinary approaches.

The themes of the seminars represent vital concerns of the faculty and have been designed to meet a variety of intellectual interests of the incoming freshman.

The faculty hopes that each student will expose himself to areas of knowledge and ways of thinking which may be new to him and which may change altogether his ideas about desirable areas of specialization. Since it is important that this diversified experience be gained early, the faculty strongly recommends that the other three courses in each of the freshman semesters be in three different departments. Sophomores normally will not be permitted to take more than two courses in the

same department in any one semester. The Committee on Student Standing and Programs will exercise general supervision over unusual combinations of courses.

The courses open to freshmen are generally numbered below 200. If he is qualified, a freshman may be permitted by the department concerned and by the Associate Dean to take more advanced courses.

FRESHMAN INQUIRY*

In the spring of his freshman year, each student will be required to participate in a Freshman Inquiry. The purpose of the Inquiry is to advise the student through a review and evaluation of his performance and future study plans.

The Inquiry consists of an oral examination and assessment of circa 75 minutes. In preparation, all participating students must prepare a 1500 word essay describing their current intellectual position and submit a justified plan for their future course of study. In addition, students may present one example of what they consider to be their own best work.

In September each freshman and his adviser must draw up a two-year study plan keeping in mind the "Guidelines for Liberal Education." A copy of this plan must be filed with the Associate Dean for inclusion in the student's record. Study plans substantially at variance with the "guidelines" must be justified in writing by the adviser. Subsequent substantial departures from the plan of study require a written explanation by the adviser to be submitted to the Associate Dean.

Inquiry committees normally consist of three faculty members and two seniors, the faculty representing the different divisions of the College, the seniors to come from different divisions and not from the departments of the faculty members. Where possible, the student's adviser will be a member of the Inquiry Committee.

Inquiry committees may simply approve a student's performance and study plans, or may approve of his performance but suggest changes in his plan of study, and/or require the student to repeat the Inquiry in his sophomore year. Committees will discuss their assessment with the student present and participating. A written version of each student's assessment will be filed with the Recorder who will transmit copies to the student and his adviser before registration for the following semester.

*This applies to the Class of 1974 and those following; some members of the Class of 1973 may be required by the Associate Dean and/or the adviser to take the Inquiry in the spring of 1971.

A copy will also be placed in the student's College record, but it will not become part of his transcript.

BACHELOR'S DEGREE

To graduate from Haverford College a student must complete successfully the equivalent of four years of academic work, a specific minimum number of semester courses (see below) and five terms of work in physical education taken in the first two years.

In addition, for the Class of 1971, a student must include among the 36 courses required for the degree: the former English 11-12 or its equivalent, the courses needed under the distribution requirement, and those required by his major department. The requirements for the Class of 1972 are the same, except that 34 courses are required for the degree.

For the Class of 1973 and those following, a student must include among the 32 courses required for the degree, one freshman seminar in each semester of his first year. He must also take an Inquiry (see above).

To avoid undue specialization the College requires that 21* courses be passed in departments outside the student's major. Classics majors and students with double majors automatically satisfy this requirement.

A course cannot be used to satisfy a major department requirement for the degree if the grade is below 65.

A degree candidate must also meet the standards of his major department in work designed to provide, in his senior year, a synthesis and evaluation of his work in the department.

Each student is accountable to himself and to the College (through the Committee on Student Standing and Programs) for the use to which he puts his talents and the resources of the College. This means that a student who is passing may be dropped and one who is failing may be permitted to continue. Although he may be permitted to continue at the College by the Committee on Student Standing and Programs, a student who fails to pass at least eight semester courses will be considered academically deficient, as will one who barely passes his courses in any semester beginning with his sophomore year.

Through the Academic Flexibility Program described later, a student may introduce variations in programs to meet his particular needs.

The degree conferred upon candidates meeting the requirements is that of Bachelor of Arts, or, upon request from students majoring in the natural sciences, mathematics, or engineering, Bachelor of Science.

*19 for the Class of 1972 and those following.

Course Load

A normal course load for each semester is considered to be four courses.* Any student is free to take more than the number of courses required for the degree, but to take more than five at one time he must have had a sufficiently strong record the preceding semester, as judged by the Associate Dean. To take fewer than four courses in any semester, a student must secure the approval of the Committee on Student Standing and Programs, with the exception that he may take three and one-half courses in one semester providing he takes four and one-half in the other.

Course Intensification

The College believes that experience in a wide diversity of courses is an essential part of a Haverford education, but the College also recognizes that students may sometimes profit from the opportunity to work more intensively in a smaller number of subjects. Therefore, with the approval of his adviser, a student may register, with the instructor's permission, for double credit in one course and, in unusual cases, in more than one. In a double-credit course, the student undertakes an approved program of independent study in conjunction with a regular course and submits a paper or passes an examination based on his independent work. Such independent work is not suitable in all subjects, and the instructor of the course must be the final judge of whether or not it should be attempted. In unusual cases a student may apply to the Committee on Student Standing and Programs for permission to pursue a reduced program without enrolling in a double-credit course.

Distribution Requirement†

By the end of his sophomore year a student must have passed the former English 11-12 or its equivalent, and in addition at least two semester courses in each of the three divisions of the College. For the purposes of this requirement courses cross-listed between departments in two divisions will count only in the division in which they are actually taught. General courses meet distribution requirements in the division in which they are actually taught. Elementary and intermediate language courses may not be counted toward distribution requirements.

The departments of the College (including Bryn Mawr departments of Archaeology, Geology, History of Art and Italian, for which Haverford has no counterparts) are divided into three divisions as follows:

*Prior to the academic year 1969-70 the normal course load was five courses each semester during the first two years and four each semester during the last two.

†This applies to the Classes of 1971 and 1972.

Humanities: Archaeology, Classics, English, Fine Arts, French, German, History of Art, Italian, Music, Philosophy, Religion, Russian and Spanish.

Natural Sciences: Astronomy, Biology, Chemistry, Engineering, Geology, Mathematics and Physics.

Social Sciences: Economics, History, Political Science, Psychology, and Sociology and Anthropology.

Courses taken at Bryn Mawr College will be accepted as satisfying distribution requirements, but not normally courses taken elsewhere. For transfer students, credit toward distribution requirements for work already done is evaluated by the Associate Dean at the time of admission.

Foreign Languages

In order to graduate, a student whose native language is English must complete one year of a foreign language at Haverford or two years' work by qualifying examination.

At the time a student is admitted to a department his major supervisor, in consultation with the student and his language instructors, will decide whether the student's projected upperclass work and special interests require him to pursue additional language study, and if so, what study is required.

Free Electives

A number of courses sufficient to bring the total to at least the number of semester courses required for the degree shall be chosen by the student in consultation with his faculty adviser, with the understanding that the College reserves the right, through the adviser and the Associate Dean, to prevent unreasonable combinations.

Non-Academic Requirements and Electives

In addition to the semester courses of academic work required, five terms of non-academic work in physical education are required of each student during the freshman and sophomore years, unless the student is excused on medical grounds. Students may select courses for credit from among offerings in intercollegiate, intramural, and instructional activities, or they may propose project courses for the approval of the department chairman. The non-academic program offers courses in three nine-week terms in the fall, winter and spring.

Students who fail to fulfill the non-academic work requirement may not be permitted to continue at the College. All cases of failure to fulfill the requirement will be reviewed by a committee consisting of the dean of students, the chairman of the physical education department and two students.

Major Concentration

Specific requirements for Major Concentration are stated under the name of each department. During the fourth semester of his attendance, each student should confer with the major supervisor of the department in which he wishes to major, and apply to him for written approval of a program of courses for the last four semesters. Such a program must provide for the completion, by the end of the senior year, of approximately 12 semester courses, or the equivalent, at least six of which must be in the major department and the others in closely related fields. Should the student's application be rejected by all departments in which he is interested, he should consult the Associate Dean. Each student is expected to file with the Associate Dean, before the date specified on the College calendar, a copy of his major program signed by his major supervisor. Any student who continues delinquent in this matter, unless he is excused by the Associate Dean, will be debarred from the final examinations in his fourth semester. Should the student's application be rejected by all the departments to which he applies, he will not be permitted to continue at the College.

A student who applies for permission to become a major in any department may be rejected for *scholastic reasons only*. The College rule on this point is:

If, at the time specified for application, the average of the grades obtained by a student in the "preliminary courses"* of any department is 75 or above, the student will be accepted by that department.

If the average of the grades obtained in these courses is below 70, the student will be accepted in that department only under exceptional circumstances.

If the average of the grades obtained in these courses is 70 or above, but below 75, the decision will be at the discretion of the major supervisor.

*"Preliminary courses" are any courses the student may already have taken in the department to which he is applying. If the applicant has not already taken any courses in that department, the department may name courses in other departments which are to be regarded as "preliminary."

A student who has been formally accepted as a major by any department has the right to remain as a major in that department as long as he is in college. Should he wish to change from one department to another after the beginning of his fifth semester, the change can be made only with the consent of the new major supervisor and the Associate Dean.

The College affirms the responsibility of each department to make the work in the major field as comprehensive as possible for the senior. There is a need, in the senior year especially, to challenge the student's powers of analysis and synthesis and to foster the creative use of the knowledge and skills that he has acquired in his previous studies. There is also the need to evaluate the performance of the senior in the field of his major, not only to safeguard the academic standards of the College but to help the student discover where he stands at this moment in his career. In short, synthesis and evaluation in some form are both essential.

While upholding these educational objectives, the College recognizes that they may be achieved by various means, such as (1) a Senior Departmental Study course, at the end of which the student takes a comprehensive examination, (2) a thesis or advanced project paper, (3) a course or courses specially designed or designated, or (4) some combination of these or other means.

Each department, therefore, in its statement of major requirements is expected to specify the particular mode of synthesis and form of evaluation that it has adopted for the senior year.

Examinations in courses in the major subject taken in the last semester of the senior year may be omitted at the discretion of the major supervisor.

Courses taken in summer school will not satisfy Haverford course requirements for the major unless prior written approval is granted by the major supervisor.

A student who has demonstrated unusual maturity and who has special interests and abilities may be permitted to arrange an *inter-departmental major*. The program of courses and the nature of the comprehensive examination will be worked out at the time the major is selected by the student in consultation with, and subject to, the approval of the chairmen of the departments concerned, one of whom will be designated as major supervisor for that student. The permission of the Associate Dean is also required for an interdepartmental major.

In rare cases, and only for high-ranking students, a *double major* may be arranged, in which the student takes the complete major in each of

two departments. In order to take a double major, a student must receive permission from the Associate Dean as well as from the chairman of each of the departments concerned.

It is possible for a student, through the Academic Flexibility Program, to design his own major.

There also exists (largely through the initiative of an interested student) an Urban Studies major, described in detail elsewhere in this catalog, which allows a focus provided by none of the departments of the College but which is based on work offered by the departments.

Independent Study Courses

Most departments offer Independent Study Courses, numbered 480f and 480i, for the purpose of encouraging independent work by qualified students. These courses provide opportunities to investigate topics not covered in formal courses, to do extensive reading on a subject, to do field work, or to do library research. A student wishing to undertake independent study must secure the permission of his adviser for the project and of a faculty supervisor prior to registering for the course. Members of the faculty are under no obligation to supervise Independent Study Courses. Independent study done without faculty supervision will not be given College credit. Requirements such as examinations or papers are determined jointly by the instructor and the student. Written evaluation of the work performed may be submitted in place of a numerical grade.

A student may register for only one credit of Independent Study per term. These courses are normally of half-credit value unless specified for a full credit by the instructor. To undertake more than one, he must secure permission from the Committee on Student Standing and Programs. A student wishing to explore more thoroughly a subject covered in an existing course is urged not to undertake an Independent Study Course, but to consider the "double credit" option.

FINAL HONORS

Final Honors are awarded to students who have undertaken and carried through academic work of high quality. Final Honors are of two kinds, those awarded by departments and those awarded by the College.

1. The exact nature of departmental Honors work and the criteria used in judging it are listed in the departmental statements in this catalog. For Honors the work in the department must be considerably

superior to that required for graduation, including a demonstration of the student's competence, insight and commitment to his field of interest.

Individual departments may award Honors to students whose departmental work has been of high quality and High Honors to those who have demonstrated both high quality and originality, indicating an unusual degree of competence.

2. Students who have been awarded Departmental Honors may be invited by the Committee on Student Standing and Programs to stand for College Honors: *magna cum laude* or *summa cum laude*. *Magna cum laude* indicates that a student has understood to a superior degree the significant relations between the area of his own specialized competence and his College work as a whole. *Summa cum laude* indicates an even more outstanding achievement. *Magna cum laude* and *summa cum laude* are awarded by the faculty on recommendation of the Committee.

The Committee on Student Standing and Programs will fix the minimum academic standards and procedures acceptable in any year for *magna cum laude* and *summa cum laude* and may require oral and/or written examinations or essays.

FLEXIBILITY PROGRAM

Since different students have different needs, abilities, and goals, there may be cases where the general regulations prevent a student from making the best use of educational opportunities at Haverford. Provision is therefore made for changing the normal requirements in certain individual cases.

Power to act on requests for exceptions to any of the academic regulations is in the hands of a standing committee of the faculty, called the Committee on Student Standing and Programs, which consists of three faculty members, the Associate Dean of the College and three students. Before granting an exception, the committee will secure approval from the student's major supervisor or, if the student is an underclassman, from his adviser. Any student who believes that a special course program would promote his best intellectual development, is invited to present a proposal to this group. Students with exceptional abilities or exceptional preparation or both are encouraged to consider whether a program out of the ordinary may help them to make the most of their opportunities. The College suggests consideration of the following, as examples of special programs which might be followed:

Enrichment and Independent Study. Students with outstanding records who have the approval of the appropriate departmental chairmen and the Committee on Student Standing and Programs may depart from the usual course patterns. Three examples follow:

- (a) A student admitted to the *Thesis Program* may enroll in his senior year in as few as three courses, and complete a thesis based on independent work.
- (b) A student admitted to an *Interdepartmental Program* must first have been accepted as an interdepartmental major (the two departments need not be in the same division). His program, which may include a reduced course load and a thesis, as in (a) above, will also include some advanced independent work relating to both departments.
- (c) A student admitted to a *Concentrated Program* will be permitted more than the usual amount of concentration, taking in each of two or three of his last four semesters, two double-credit courses in his major field, or a closely related field.

Students who meet the standards set by departments for Honors may be granted departmental or interdepartmental Honors for these programs.

Graduation in less than eight Haverford semesters. Students with extra credits, gained from the Advanced Placement Program, summer school, or carrying an overload, or from some combination of these, may be able to finish requirements for the Haverford degree in less than the normal four years. Other students may obtain credit for a year's work under either the Study Abroad or the Junior Year Language programs. Such students, like transfer students, may graduate after fewer than eight semesters at Haverford, but with the usual number of course credits.

Sufficiently mature students, if they possess outstanding ability or are judged to have legitimate reason for special consideration, may be allowed to graduate without necessarily accumulating all of the credits normally required. The Committee on Student Standing and Programs may approve an individual student course program for graduation with fewer than the usual number of courses. Three examples of possible programs are:

- (a) *Graduation after three years:* A student who has done consistently good work and who, by the beginning of his second year at Haverford, has credit for 15* or more courses, may request per-

*12 for the Class of 1973 and those following.

mission to graduate after only two more years at the College. If such permission is granted, it will be with the proviso that he must maintain a very high level of performance and, to help assure sufficient breadth in his program, he must not only meet the usual distribution and minimum departmental requirements, but must study for four consecutive semesters some subjects (or meaningful combination of subjects) outside of the division in which his major department lies. His continuation in this program is subject to review, before he enters his senior year, by the Committee and by his major supervisor.

- (b) *A term away from Haverford:* There may be occasion when a student's needs are best served by studying or serving elsewhere for a time, without gaining formal academic credit, as he would if he were in a program like Study Abroad. A student accepted into the "term away" program must meet all departmental and distribution requirements, and must successfully complete a total of seven semesters at Haverford and at least one semester elsewhere (or six at Haverford, and two or more elsewhere) engaged in a program (academic, service to others, gainful employment, etc.) approved in advance by the Committee on Student Standing and Programs and by his major supervisor, and evaluated by them after completion.
- (c) *Reduced course load:* The course requirement in effect at Haverford helps to assure the diversity which is an important part of a liberal education. There may, however, be students who could profit by carrying fewer than the normal number of courses each semester. The Committee on Student Standing and Programs is authorized to permit some students, where good reason can be shown, to omit one of their courses.

Graduation in more than eight Haverford semesters. Although most students are expected to graduate in four academic years, some, as indicated above, may take less and some may be permitted to take more.

Students who wish to take a five-year program with no modification of requirements should secure the approval of their adviser and of the Associate Dean. In all other cases of extended programs, even if no modification of academic requirements is involved, the student should petition the Committee on Student Standing and Programs.

Examples of the latter would include students with physical handicaps which prevent them from carrying a full load, students who wish to complete a program in four and one-half years, and students who wish

to take, simultaneously with their work at Haverford, part-time work elsewhere (such as journalism, design, etc.) for which academic credit at Haverford is not appropriate. All petitions for academic flexibility should be submitted in writing to the Associate Dean who will present them to the Committee on Student Standing and Programs. To be considered, a petition must bear the written endorsement of the student's adviser.

FIVE-YEAR PROGRAM

Haverford offers a five-year program in addition to its regular four-year program.

A student becomes eligible for the five-year program by demonstration of compelling educational necessity for such a program to his adviser and to the Associate Dean. If, in the judgment of the Associate Dean, modification of the normal requirements is involved, the student must also secure the approval of the Committee on Student Standing and Programs.

Students will normally be expected to request admission to the program during their sophomore or junior years.

DEVELOPMENTAL READING

A program of developmental reading, under the supervision of the counselors, offers an opportunity for students to improve their reading and study proficiency. Few students, if any, have realized their real potentiality in this field. Through a series of conferences, and some group sessions, methods of developing higher level reading skills are explored and practiced. Any student who is willing to concentrate upon it, while reading for his various subjects, will find that he can increase his speed and comprehension.

PREPARATION FOR PROFESSIONS

A large number of Haverford College students plan, after graduation, to enter upon further courses of study. As a liberal arts college, Haverford arranges its curriculum so that students who have such plans are able to meet the entrance requirements of graduate and professional schools. The College does not, however, attempt to anticipate in its own curriculum the work of any graduate or professional school. It is the conviction of the faculty that the best preparation for graduate work is a liberal education with sound training in basic disciplines, to which more specialized training may later be added.

A student who intends to go to a professional school is free to choose his major in accord with his principal abilities and interests, since professional schools, such as those of business administration, education, law, medicine, or theology, usually accept students on the basis of merit regardless of their choice of major and, except in the case of medical schools, without specific course requirements. The requirements of most state boards of medical licensure are such that all students who hope to be admitted to a medical school must take two semester courses, each of which must include laboratory work, in biology (usually Biology 002a and Biology 100), Chemistry 107a, 108b, 202b, 203a, and Physics 113a, 114b.

Students who plan to go to professional schools should seek advice as early as possible from appropriate faculty members as follows: education, Mr. Lyons; engineering, Mr. Hetzel; international affairs, Mr. Hansen; law, Mr. Mortimer; medicine, Mr. Kessler; theology, Mr. Luman.

If a student plans to do graduate work in a departmental subject, such as economics, mathematics, history, etc., he should consult as early as possible with the chairman of the department at Haverford which most nearly corresponds to the department in which he plans to work in graduate school. This adviser will be able to guide him in his selection of courses, his choice of major (which will not *necessarily* be in the department of his intended graduate study), and other questions which may have bearing on his future.

Law schools, medical schools, and some graduate schools require applicants to take special admission tests. Arrangements for taking these tests are the responsibility of the student concerned; he can obtain information about them from the faculty members mentioned above.

ACADEMIC REGULATIONS

The academic regulations of Bryn Mawr College will apply to Haverford students enrolled in Bryn Mawr courses. Administrative interpretations or decisions will be made by the deans at Bryn Mawr.

Bryn Mawr students in Haverford courses are subject to Haverford regulations as applied and interpreted by the Associate Dean.

Conflicting Courses

A student is not allowed to elect conflicting courses, except with the permission of the Associate Dean and the two instructors concerned.

Audited Courses

A student who wishes to audit a course should obtain the permission of the instructor. No charge is made for auditing, and audited courses are not listed on the transcript.

Course Changes

Courses may be changed during the first two weeks of each new semester. During that time students are free to make changes after consultation with their advisers and the Associate Dean.

Changes will not be permitted later except in cases where the student is known to be an excellent student and where he receives the consent of the professor to whose course he is changing and of his adviser and of the Associate Dean.

A student who has registered for a fifth course may drop that course without penalty at any time before the end of the fourth week of classes with the approval of his adviser and the Associate Dean.

Lecture and Laboratory Courses

With the approval of the instructor in the course, the student's adviser, and the Associate Dean, a student may take for credit either the laboratory work or the class work of a course which normally includes both. The grade received is recorded on the student's transcript with the notation "Lecture only" or "Laboratory only," as the case might be.

Such a course is not included among the courses required for graduation, nor among the courses required outside the student's major department, nor among the courses needed to meet a limited elective requirement.

Evaluation of Academic Performance

The instructor in each course submits at the end of each semester a numerical grade, or in some senior seminars, a written evaluation for each student. A grade of "CIP" (course in progress) may be submitted at midyear for senior research courses which run throughout the year, and for certain other courses as agreed on by the instructor and the Associate Dean, and so announced at the beginning of the course.

Passing grades at Haverford range from 60 to 100 inclusive. Failing grades range from 45 to 59 inclusive (the lowest grade given to a student who completes a course is 45).

If a student drops a course, or is required by his instructor to drop it, the grade is recorded as "DR" and counts as a 40. If a student is permitted to withdraw from a course for unusual reasons including those beyond the student's control, such as illness, it is recorded as "W" and is not assigned a numerical grade, nor regarded as a failure.

The Committee on Student Standing and Programs reviews students' records at intervals, and has authority to drop students from college, or to set requirements for additional work in cases of students whose work is unsatisfactory. As a rule, the Committee will drop from college freshmen who do not pass their courses, and those upperclassmen who do not show work which is better than passing. The normal expectation is that each year a student's work should show noticeable improvement. Furthermore, any student whose record is such as to justify the belief that he is not availing himself of the opportunities offered by the College may be dropped at any time the Committee makes such a determination.

In a year course in which the work of the second semester depends heavily on that of the first, a student who fails the first semester but nevertheless is allowed to continue may receive credit for the first semester (although the grade will not be changed) if his grade for the second semester is 70 or above, provided that the instructor in the course states in writing to the Recorder at the beginning of the second semester that this arrangement applies.

A student who, because of special circumstances such as illness, receives a low grade in a course, may petition his instructor and the Associate Dean for a special examination. If the request is granted and the student takes the special examination, the grade in that examination will replace the grade originally received in the midyear or final examination in computing the final grade for that course; the new course grade will be entered in place of the old on the student's transcript, and the semester average will be revised accordingly.

*Policy on Release of Student Grades
Received during the First Two Years*

Grades received by students at Haverford College during their first two years are intended for internal use. The intention of the faculty is to recognize the first two years as a time prior to majoring, when students should be encouraged to do the maximum of experimentation in new areas where their interest may be high but their aptitude may be untested.

The official transcript records only whether a student dropped, failed or withdrew from a course. The absence of any notation is an indication that he passed.

The Associate Dean of the College makes all decisions on any exceptions to this policy. The student's request is a necessary, but not always a sufficient, condition for the release of grades.

Normally, grades for the first two years are released only to another college or university when the student is transferring during the first two years.

Courses taken in the first two years which are directly related to the student's intended graduate study, may be released to graduate or to professional schools.

Grades are not provided for use by insurance companies.

Late Papers

If a paper is assigned in place of the final examination in a course, the date by which it is due may be set by the instructor not later than 4:00 p.m. on Wednesday, January 13th, 1971, for the first semester, or Tuesday, May 18th, 1971, for the second semester. Laboratory notebooks must be turned in not later than these same dates. Late papers or notebooks will be given one-half of the grade they would have received, unless arrangements have been made in advance with the instructor in the course and the Associate Dean. If a paper represents the entire grade for a course, the maximum grade for such a late paper is 60 or, in a course required for the major, 65. Full details of academic procedures and regulations concerning the proper completion of work are issued during each semester.

Courses Taken Without Recorded Grade

Each semester juniors and seniors may elect one course outside the division of their major department, for which no grade will be recorded on the transcript. A notation will be made, however, if the student fails, drops, or is permitted to withdraw from the course. Students must inform the Recorder of a course to be so handled by the end of the fourth week of classes.

Courses with Written Evaluation

In certain senior seminars, a department may choose to give a brief written evaluation of performance instead of a numerical grade. These evaluations will be attached to the transcript record and will serve in place of numerical grades in those courses. Where such evaluation is to be used, this fact will be announced to the students at the time of registration.

INTERCOLLEGIATE COOPERATION

The variety of courses available to Haverford students is greatly increased as a result of a cooperative relationship among Haverford, Bryn Mawr College, Swarthmore College, and the University of Pennsylvania. Under this arrangement, full-time students of any of these institutions may, upon presentation of the proper credentials, enroll for courses at another institution of the group without added expense.

Students wishing to take advantage of this arrangement must obtain the permission of the Associate Dean.

Haverford students taking courses at the University of Pennsylvania are expected to make their own arrangements for transportation. Bryn Mawr and Haverford jointly operate two buses which make regular hourly trips between the two campuses on weekdays, and a bus operates several times a day between Haverford and Bryn Mawr and Swarthmore.

STUDY ABROAD

Well-qualified students who request it may be granted permission to spend a semester or a year studying in a foreign country. Such permission will require approval of the student's major supervisor and the Associate Dean. If the student is not a language major, approval will also be required of the chairman of the department of the language spoken in the country selected. Interested students should consult the Associate Dean early in the sophomore year; he will direct them to faculty members best qualified to advise them. Students who may want to take their entire junior year abroad should plan their programs so that all limited elective requirements are completed by the end of the sophomore year. The program of studies abroad must be worked out in advance; if the program is completed successfully, the College will grant credit toward the degree for the work accomplished. Scholarship funds may be transferred for approved study abroad.

JUNIOR-YEAR LANGUAGE PROGRAM

Provision is made, through a cooperative program with Princeton University, for the intensive study of certain languages not offered at Haverford — Arabic, Chinese, Japanese, Persian, and Turkish. A student participating in this program spends the summer after his sophomore year in a program of intensive study of the language chosen, and then spends the junior year at Princeton University, continuing the study of the language and taking each semester two or three other

courses in related regional studies. The remainder of his program will be electives, usually courses important for his major at Haverford.

Students interested in this program should confer with the Associate Dean in the early spring of the sophomore year. To be nominated by the College, a student must have a good academic record, and must have secured the approval of his major supervisor. Selection from among the nominees is made by Princeton University.

Students who wish to study the less common languages without taking time away from Haverford should consider the offerings in Italian at Bryn Mawr College and in Oriental, Scandinavian, and Slavic languages at the University of Pennsylvania. Arrangements for taking such courses may be made in consultation with the Associate Dean.

AFRICAN STUDIES

Students wishing to focus their interest on African civilization are encouraged to enroll in courses emphasizing African materials offered by several departments in the humanities and social sciences at Haverford, Bryn Mawr and Swarthmore Colleges and to arrange for regional concentration in fulfilling departmental requirements for majors. In planning their programs, students should consult Professor Harvey Glickman, director of African studies, or Professor Wyatt MacGaffey.

VISITORS AND LECTURES

Individual departments of the faculty invite visitors to Haverford for varying periods of time to meet with members of the department and with students interested in that field. These departmental visitors, who sometimes give public lectures, contribute considerably to the vitality of the work in the various departments.

This program has been greatly strengthened as a result of a generous bequest from the late William P. Philips. A substantial sum from this bequest is used to bring to Haverford "distinguished scientists and statesmen," whose visits may last anywhere from a few hours to a full academic year.

CENTER FOR NONVIOLENT RESOLUTION OF CONFLICT

Haverford College has long had a special concern for the peaceful resolution of conflict, particularly where it involves interracial or international relations. Current urban unrest and increasing violence among nation-states call for new approaches to conciliation and problem-solving.

Young men, faced with involvement in war and with racial injustice that conflicts with their basic values, have a special concern for seeking constructive ways by which to influence the course of such conflicts away from war and domestic violence.

Haverford's tradition also includes a commitment to encourage and work for social and political change that assures an individual's dignity, economic justice in society, and the opportunity for the fullest development of a man's potential regardless of his origins — all brought about by nonviolent means.

These concerns for creative resolution of violent conflict and for nonviolent means of inducing change have led the College to provide for the establishment of a Center for Nonviolent Conflict Resolution. In the Center program, students and faculty, in seminars, in individual and group research projects, and in action programs increase their understanding of human conflict and its relationship to change, and explore ways of developing nonviolent means for limiting it.

The Center is supported by a grant from the Ford Foundation, by means of which it operates two programs in urban poverty neighborhoods and one in suburban Philadelphia, in all of which Haverford students may participate for academic credit. The objective of both urban and suburban programs is to promote a healthy mixture of detachment and involvement that encourages both relevant scholarship and enlightened service for change. Further information on the Educational Involvement Program is provided elsewhere in this catalog.

The Center program is concerned as well with international peace and nonviolent change. An International Affairs Internship is being developed with the American Friends Service Committee.

Students interested in the program should consult Paul Wehr, director of the Center.

THE MARGARET GEST CENTER FOR THE CROSS-CULTURAL STUDY OF RELIGION

The establishment of the Center was made possible by a bequest of Margaret Gest in memory of her parents, Emily Judson Baugh Gest and John Marshall Gest. In keeping with Miss Gest's desires and will, the Center aims "to promote better understanding among peoples" through the study of the "fundamental unity of religions" without "negating the differences." The current Center program is supported by a friend of Margaret Gest.

The Center is under the direction of Professor Gerhard Spiegler and a College Advisory Council. The following courses of lectures are supported by the Center:

- | | |
|--|----------------|
| 1. Philosophy East and West. | Mr. Desjardins |
| 2. Religious Traditions in India: Ancient and Modern. | Mr. Long |
| 3. The History of Western Religious Thought
and Institutions. | Mr. Luman |
| 4. History and Principles of Quakerism. | Mr. Bronner |

T. WISTAR BROWN FELLOWSHIP

Haverford College has resources available from the T. Wistar Brown Fund which make it possible to provide a Fellowship each year for a mature scholar. The recipient of this Fellowship usually spends most of his time doing research in the Quaker Collection of the Library. The Fellowship currently carries a stipend of \$6,000.

Inquiries regarding this Fellowship should be addressed to the office of the Provost.

POST-BACCALAUREATE FELLOWSHIP PROGRAM

Under this program, established in 1966, fellowships are awarded to young men and women of promise who can profit by studying for a year at a highly demanding liberal arts college after receiving the bachelor's degree and before entering graduate or professional school. It is supported by substantial grants from the Rockefeller Foundation and the Josiah Macy, Jr. Foundation and smaller grants from several other sources. Most of the scholarships have been awarded to graduates of the predominantly Negro colleges of the South.

For the academic year 1970-71, support is available for approximately 30 students interested in earning a Ph.D. degree and following careers of college or university teaching and research, and for 24 students interested in medicine. Fellows for this year will study at Bryn Mawr, Haverford, Oberlin, Pomona, and Swarthmore Colleges. They will choose their courses from the regular offerings, selecting those they feel will best fill their scholarly needs and interests.

HONOR SOCIETIES

Phi Beta Kappa. The Haverford College Chapter of the Phi Beta Kappa Society of America was chartered in 1898 as Zeta of Pennsylvania. Election of members-in-course, alumni members, and honorary

members, based upon scholarly attainment and distinction, takes place toward the end of the academic year.

President, Bernard V. Lentz '33; *Secretary*, Holland Hunter '43; *Treasurer*, John Davison '51.

Founders Club. The Founders Club was established in 1914 as a Haverford organization of students, alumni, and faculty. Election to its membership is recognition of a sound academic record combined with noteworthy participation in extracurricular activities. Undergraduate elections are usually limited to the junior and senior classes. *President*, E. Howard Bedrossian '42; *Secretary*, Robert Ihrie, Jr. '70; *Treasurer*, Matthew M. Strickler '62.



COURSES OF INSTRUCTION



NUMBERING SYSTEM

001-099 indicate elementary and intermediate courses.

100-199 indicate first year courses in the major work.

200-299 indicate second-year courses in the major work.

300-399 indicate advanced courses in the major work.

400-499 indicate special categories of work (e.g., 480 for independent study courses).

a . . . the letter "a" following a number, indicates a one-credit course given in the first semester.

b . . . the letter "b" following a number, indicates a one-credit course given in the second semester.

c . . . the letter "c" following a number, indicates a one-credit course given two hours a week throughout the year.

d . . . the letter "d" following a number, indicates a half-credit course given during September-October.

e . . . the letter "e" following a number indicates a half-credit course given during November-December.

f . . . the letter "f" following a number indicates a half-credit course given throughout the first semester.

g . . . the letter "g" following a number indicates a half-credit course given during February-March.

h . . . the letter "h" following a number indicates a half-credit course given during April-May.

i . . . the letter "i" following a number indicates a half-credit course given throughout the second semester.

In general, courses listed as full-year courses (two credits) must be carried through two semesters. In some cases one semester of such a course may be taken with credit, but only with permission of the department concerned. Students are reminded that one course carried throughout the year is the equivalent of eight semester hours.

ASTRONOMY

Professor LOUIS C. GREEN, *Chairman*

Associate Professor R. BRUCE PARTRIDGE†

The departmental work is designed to give students an understanding of and an interest in the universe in which they live. The relation of astronomy to other fields of learning is kept to the fore.

MAJOR REQUIREMENTS

The normal major requirements are Astronomy 211a, 212b and four additional 1-semester courses numbered above 300; Mathematics 113a and 114b, or 119a; Physics 115a and 116b, or the former 19; three written comprehensive examinations of three hours each.

REQUIREMENTS FOR HONORS

All astronomy majors are regarded as candidates for Honors. The award of Honors will be made on the basis of superior work in the departmental courses, in certain related courses, and in the comprehensive examinations.

101a THE DEVELOPMENT AND IMPACT OF ASTRONOMICAL IDEAS Mr. Partridge

A non-technical introduction to the astronomer's view of the universe. In general, a historical approach is used, from the ideas of Copernicus and Galileo, through the early astrophysicists of the last century, to Einstein and Hubble. The course will attempt to show how astronomical discoveries have fundamentally altered our ways of perceiving the universe.

102b ASTRONOMY OF THIS DECADE Mr. Partridge

Some of the important astronomical discoveries of this decade are discussed semi-quantitatively. Emphasis is placed on objects such as pulsars and quasars which have greatly extended the range of our knowledge of the physical world, on new and puzzling phenomena such as gravity waves, and on results obtained through the space program. Prerequisite to Astronomy 102b is Astronomy 101a or the consent of the instructor.

121a THE SOLAR SYSTEM Mr. Green

This introductory course develops the dynamics necessary for an understanding of the principal motions and interactions of the bodies in the solar system. The vector model of atomic and molecular structure is discussed and used to interpret the spectra of the planets, comets, and sun. This information together with that available from direct observation from the earth's surface and from space is united in a discussion of the origin of the

†Appointed on the Sloan Foundation Grant.

solar system. Optional observation periods, as well as an opportunity for students to use the telescopes on their own. Prerequisite: Mathematics 113a or the consent of the instructor.

122b STARS AND GALAXIES

Mr. Green

This introductory course deals with the dynamics, characteristics, and physical conditions of the different kinds of objects found in the universe, stars, clouds of diffuse matter, and various types of galaxies, as derived from direct observation and from spectroscopic and theoretical studies. The evolution and interaction of these components of our universe and the probable history of the universe as a whole are reviewed. Optional observation periods, and opportunities for individual use of the telescopes. Prerequisite: Astronomy 121a or the consent of the instructor.

211a, 212b METHODS OF THEORETICAL PHYSICS AND ASTROPHYSICS

Mr. Green

Ordinary and partial differential equations as well as certain integral equations of astronomy and physics are discussed. Attention is given to the more important special function, Sturm-Liouville theory, Green's functions, and boundary value problems. Approximate solutions are sought by linearization, perturbation, and variational procedures, with some use of numerical methods. Applications will be to the quantum mechanics of atomic, molecular, and nuclear structure and collisions, the Hamilton-Jacobi theory of satellite and planetary motion, the mechanics of deformable bodies as applied to astronomical problems, and radiative transport. Prerequisite: Mathematics 113a and 114b, or 119a, and Physics 115a and 116b, or the former 19. Prerequisite to Astronomy 212b is Astronomy 211a or the consent of the instructor.

311a GENERAL RELATIVITY AND HIGH ENERGY ASTROPHYSICS

Mr. Green

The tensor calculus is developed and applied to a discussion of general relativity and certain current variants. The observational and experimental evidence is reviewed. Problems of high energy astrophysics, particularly gravitational radiation and gravitational collapse, are considered. Prerequisite: Mathematics 113a and 114b, or 119a, and Physics 115a and 116b or the former 19.

Offered in 1971-72 and alternate years.

320b COSMOLOGY

Mr. Partridge

Various theoretical models for the origin and evolution of the universe, including the "Big Bang" and "Steady State" models, are discussed. The relevant observational evidence is then reviewed. The course ends with an attempt to construct a unified picture of the evolution of the universe and some of the systems within it. Prerequisite: Mathematics 113a and 114b, or 119a, and Physics 115a and 116b, or the former 19.

Offered in 1971-72 and alternate years.

340b RADIO ASTRONOMY

Mr. Partridge

The course provides an introduction to the basic techniques of radio astronomy and to the various mechanisms that give rise to line and con-

tinuum emission at radio frequencies. In addition, some of the most important observational results of radio, infra-red, and other non-optical branches of astronomy are presented. Prerequisite: Mathematics 113a and 114b, or 119a, and the former Physics 19 and 20, or 213a.

Offered in 1971-72 and alternate years.

360b PLASMA ASTROPHYSICS

Mr. Green

The principles of plasma physics are developed and applied to such topics as the Van Allen belts, solar phenomena, the cosmic ray flux, the alignment of the interstellar dust, and interplanetary and interstellar magnetic fields. Prerequisite: Mathematics 113a and 114b, or 119a, and the former Physics 19 and 20, or 213a, or the consent of the instructor.

Offered in 1971-72 and alternate years.

371a STELLAR STRUCTURE AND EVOLUTION

Mr. Green

The theory of stellar structure is reviewed and the problem of stellar evolution is discussed on the basis of the theoretical and observational evidence. Prerequisite: Mathematics 113a and 114b, or 119a, Physics 115a and 116b, or the former 19.

Offered in 1970-71 and alternate years.

380b NUCLEAR ASTROPHYSICS

Mr. Green

A discussion is given of the nuclear reactions leading to stellar energy generation, to the origin and abundance of the elements in various types of astronomical objects, and to the catastrophic stages of stellar evolution. The nuclear species in the cosmic rays and nuclear age determinations are considered. Prerequisite: Physics 115a and 116b, or the former 19, and Astronomy 212b (or concurrently), or the consent of the instructor.

Offered in 1970-71 and alternate years.

391a, 392b SPECIAL TOPICS IN ASTROPHYSICS

Messrs. Green and Partridge

The content of this course may vary from year to year. It may be repeated for credit. Prerequisite: considerable maturity in mathematics, physics and astronomy.

Not offered in 1970-71

480 INDEPENDENT STUDY

Messrs. Green and Partridge

An example of the content of this course is the determination of the abundance of the elements in stellar atmospheres based on high dispersion spectra obtained at one of the major American observatories. Other examples of course content are optical and microwave observations relating to cosmological problems. Prerequisite: the consent of the instructor.

BIOLOGY

Professor MELVIN SANTER, *Chairman*

Professor IRVING FINGER***

Professor ARIEL G. LOEWY

Associate Professor DIETRICH KESSLER

Assistant Professor VIVIANNE T. NACHMIAS†

Assistant Professor MICHAEL SHOWE

Laboratory Instructor LOUISE G. ONORATO

The biology program is designed to give a solid foundation in general biological principles, an insight into recent developments of experimental aspects of the field, and an opportunity for a research experience in the senior year. Special emphasis is placed on molecular and cell biology. The reading tutorials are designed primarily for students not intending to major in biology.

The prospective biology major normally takes no biology in his freshman year, but instead prepares himself for work in biology by taking chemistry and perhaps mathematics or physics.

Students with a strong high school background in chemistry may, with permission of the department, take Biology 100 in their freshman year.

The courses designed for the major program are built up in a series of three stages:

- (1) One full-year sophomore course (100), which introduces the student to cellular, microbial, and developmental biology.
- (2) Five advanced courses and laboratories numbered in the 200's to be taken at the junior or senior level, designed to create sufficient competence for research in the senior year.
- (3) Senior Research Tutorials taken for single or double credit (chosen from 300, 301, 302, 303, 304) involving reading of current literature, laboratory research, student lectures and seminars, and a senior thesis. The topics of these research tutorials lie in the areas of principal interest of the instructors. Senior Research Tutorials may be started with the consent of the

***On sabbatical leave, 1970-71.

†Appointed on the Sloan Foundation Grant.

instructor during the junior year. A student has the opportunity to apply for a summer research stipend which enables him to begin his research in the summer following his sophomore or junior year. Qualified chemistry or physics majors may be admitted to the Senior Research Tutorials with consent of the instructor.

- (4) Biology 399c, a senior seminar taken at half intensity for both semesters. It consists of student papers and discussions, faculty presentation of research problems, and the year's Philips program.

MAJOR REQUIREMENTS

Biology 100; four courses, at least two of which are selected from Biology 200a, 201b, 202b, 203b, and 204a, the other two selected from Chemistry 202a, 307d, 307e, 305d, 305e, 306b, and 356b, Biology courses at Bryn Mawr numbered 201a or higher, and Biology courses at Swarthmore numbered 25 or higher; one year-sequence of Biology courses in the 300's; Chemistry 101a or 107a, and 108b and 203b; Biology 399c. Majors desiring to take courses at Bryn Mawr or Swarthmore must first consult with the chairman of the Haverford Department. In addition, all majors, regardless of the number of Biology 200-series courses taken, must enroll in two junior-level laboratory courses. Where prerequisites are required for these courses, the student must achieve a grade of at least 70 unless otherwise stated, or receive the consent of the instructor to apply them as prerequisites.

The Department strongly recommends the following additional courses, since they provide a minimum theoretical background for advanced work in biology: Mathematics 113a and 114b, or 119a and 220b; Physics 113a and 114b, or 115a and 116b.

REQUIREMENTS FOR HONORS

Since all biology majors participate in the departmental senior research program, they are all candidates for Departmental Honors. These are awarded upon consideration of the following criteria of achievement: (a) grade average in courses, (b) senior research and thesis, (c) performance in Biology 399c.

GENERAL COURSES INTENDED PRIMARILY FOR NON-BIOLOGY MAJORS

001b READING TUTORIAL: TOPICS IN MODERN BIOLOGY I Mr. Showe

The development of current concepts of the nature of living organisms and methods of investigating it, from Aristotle through Harvey, Pasteur, and Schrödinger to Watson and Crick, with particular emphasis on 20th century discoveries and ideas. Prerequisite: consent of the instructor.

002a READING TUTORIAL: TOPICS IN MODERN BIOLOGY II

Mr. Kessler

The theory of evolution and the relationship of this theory to studies of

social behavior in animals will be the topic for 1970-71. A reading list of original works in the discipline and a study guide will be distributed at the beginning of the semester. The student will be asked to write papers carefully analyzing the material. The relevance of the readings to the study of man's social behavior will be considered. Students will meet periodically in tutorial sessions with the instructor to discuss student papers and go over study guides. A film series on animal behavior will be included as part of the course. No prerequisites.

003b READING TUTORIAL: TOPICS IN MODERN BIOLOGY III

Mr. Santer

An examination of selected topics in biology of potential interest to those whose major interest lies outside the science division. Topics to be discussed will be announced prior to registration.

004a READING TUTORIAL: TOPICS IN MODERN BIOLOGY IV

Mr. Finger

An examination of selected topics in biology of potential interest to those whose major interest lies outside the science division. Topics to be discussed will be announced prior to registration.

Not offered in 1970-71.

005b READING TUTORIAL: TOPICS IN MODERN BIOLOGY V

Mr. Loewy

An integrated approach to human biological and social evolution. Readings in philosophy of science, theories of evolution, the fossil and archeological record of man, primitive human societies, contemporary problems in human ecology and the future of man.

Not offered in 1970-71.

006b READING COURSE IN EVOLUTIONARY THEORY Mr. Finger

The purpose of this course is to enable the student to acquaint himself with evolutionary theory, both current and past, by reading advanced textbooks, reviews, and scientific journals. Prerequisite: Biology 100 or consent of the instructor.

Not offered in 1970-71.

**COURSES INTENDED PRIMARILY FOR STUDENTS
WITH PREREQUISITES IN CHEMISTRY**

100 CELL STRUCTURE AND FUNCTION

Staff

Four hours; three lectures and one laboratory period

An introductory course in cell biology which combines the areas of cytology, biochemistry, biophysics, genetics, microbiology, and some developmental biology. The purpose of this course is to integrate these diverse approaches into a unified view of cell structure and function. This is a sophomore course, although freshmen with adequate preparation in chemistry may qualify with consent of the instructor. Students who wish to postpone the

course to the junior year should obtain permission of the instructor at the end of their freshman year. Prerequisite: Chemistry 101a or 107a or consent of the instructor.

200a CELL BIOLOGY I: METABOLIC BIOCHEMISTRY AND BIOSYNTHESIS OF MICROMOLECULES Mr. Santer

A study of the various pathways of carbohydrate metabolism and of metabolic processes leading to ATP synthesis. The biosynthesis of amino acids and nucleotides, DNA, RNA, and proteins. Prerequisite: Biology 100.

201b CELL BIOLOGY II: STRUCTURE AND FUNCTION OF PROTEINS AND NUCLEIC ACIDS Mr. Loewy

A study of the structure and properties of proteins and nucleic acids. The course will include an analysis of mechano-chemical phenomena in terms of the properties of interacting protein molecules.

202b CELL BIOLOGY III: CYTOLOGY AND DIFFERENTIATION Mr. Kessler

A study of intracellular structure and function emphasizing morphological and biochemical methods. Pertinent problems in cell differentiation are considered. Seminars are organized around discussions of original journal articles. Laboratory projects provide an introduction to cytochemistry with the light and electron microscopes. Prerequisite: Biology 100.

203b CELL BIOLOGY IV: HEREDITY AND REGULATION Mr. Finger

The topics to be emphasized are the structure and mutability of genes, transmission and storage of genetic information, and the translation of this information into specific macromolecules. Cytoplasmic control of gene expression and other mechanisms for the regulation of gene activity also will be discussed. Prerequisite: Biology 100 or consent of the instructor.
Not offered in 1970-71.

204a CELL BIOLOGY V: CELLULAR CONTROL MECHANISMS Mr. Showe

This course will be a detailed study, based on a reading of original literature, of the means by which cells regulate their synthetic and metabolic processes, including: control of synthesis of small molecules (amino acids and nucleotides) and of catabolic pathways, and the integration of cell functions. Topics to be discussed will include regulation of enzyme activity, induction and repression of enzyme synthesis, and regulation of the synthesis of proteins and nucleic acids. Emphasis will be on studies performed using micro-organism-bacteria, fungi, and bacteria viruses. Prerequisite: Biology 100.

200f LABORATORY IN METABOLIC BIOCHEMISTRY Mr. Santer
One period per week, one half-credit.

The purpose of this laboratory is to gain experience in a variety of biochemical techniques. One major project will be the isolation of transfer

RNA, chromosomes and enzymes necessary for synthesis of proteins *in vivo* and reutilization of these to study aspects of protein synthesis *in vitro*.

201i LABORATORY IN MECHANO-CHEMICAL PHENOMENA

One laboratory period per week, one half-credit.

Mr. Loewy

The purpose of this laboratory is to apply the techniques of protein chemistry and enzymology to the understanding of mechano-chemical phenomena such as protoplasmic streaming and muscle contraction.

202i LABORATORY IN MICROSCOPIC TECHNIQUES

Mr. Kessler and Mrs. Nachmias

One laboratory period per week, one half-credit.

Students will carry out a project which permits the use of the electron microscope and associated techniques such as negative staining and photographic developing and printing. Some light microscope technique may also be included. The project will involve the isolation of actin and myosin from rabbit muscle and subsequent examination of their ultrastructure.

203i LABORATORY IN IMMUNOCHEMISTRY

Mr. Finger

One laboratory period per week, one half-credit.

The purpose of this laboratory is to gain experience in the application of immunological techniques to the separation and characterization of macromolecules. An immunochemical analysis of serum components will be carried out with gel diffusion techniques. Fractions purified by column chromatography and salting-out will be characterized by electrophoresis and two dimensional diffusion in tubes and slides. Students will also immunize and bleed rabbits.

Not offered in 1970-71.

204f LABORATORY IN BACTERIAL VIROLOGY

Mr. Showe

One laboratory period per week, one half-credit.

The life cycle of bacterial viruses will be examined in detail, with emphasis on the use of the bacteriophage-infected cell as a model system for examining basic life processes at the molecular level. Topics will include synthesis of macromolecules, regulation of gene expression, the effects of mutation, and the control of virus assembly. Techniques used will include electron microscopy, acrylamide gel electrophoresis and the use of radioisotopes as tracers.

300 SENIOR RESEARCH TUTORIAL IN MECHANO-CHEMICAL PHENOMENA

Mr. Loewy

Student research in the molecular basis of mechano-chemical phenomena. Techniques for structural analysis of covalent protein-protein interactions are used. Laboratory work is supplemented with readings related to the area of investigation and with the presentation of discussions by students. Prerequisite: Biology 201b or consent of the instructor.

301 SENIOR RESEARCH TUTORIAL IN CELL BIOCHEMISTRY

Mr. Santer

Student research on the chemical composition and hereditary control of cytoplasmic particles involved in protein synthesis. Laboratory work is supplemented with readings from the current literature, and seminars by students on material related to the research. Prerequisite: Biology 301b or 200a or consent of the instructor.

302 SENIOR RESEARCH TUTORIAL IN PHYSIOLOGICAL GENETICS

Mr. Finger

The major problem to be studied is the regulation of gene activity. Prerequisite: consent of the instructor.

Not offered in 1970-71.

303 SENIOR RESEARCH TUTORIAL IN EXPERIMENTAL CYTOLOGY

Mr. Kessler

Studies on the localization and structure of actin-like proteins from various cell types. Ultra-structural studies will be undertaken by electron microscopy. Various immunological methods will be employed. Prerequisite: Biology 202b or consent of the instructor.

304 SENIOR RESEARCH TUTORIAL IN MOLECULAR MORPHO-GENESIS

Mr. Showe

Studies on the synthesis of multimolecular structures in cells are carried out using biochemical and genetic techniques. The systems currently being used are the electron transport chain of *Escherichia coli*, and bacteriophage T₄. Students should be prepared to develop independent approaches to experimental problems. Prerequisite: consent of the instructor.

480 INDEPENDENT STUDY

Staff

Prerequisite: consent of the instructor.

399c SENIOR DEPARTMENTAL STUDIES

Staff

A senior seminar which meets one evening each week consisting of:

- (a) Presentation for discussion of research plans and research results by students and faculty.
- (b) Participation in the Department's Philips visitors program.
- (c) Presentation by students of papers on contemporary developments in experimental biology, providing an opportunity for library research and for the writing of a paper.
- (d) A written, open-book comprehensive examination testing the student's ability to synthesize and analyze the material in course work.

Students should register for Biology 399c in both the fall and spring terms, since the work of the course will be distributed through two semesters. Course credit is given, however, only for the second semester.



CHEMISTRY

Professor COLIN F. MACKay, *Chairman*
 Professor WILLIAM E. CADBURY****
 Professor JOHN P. CHESICK***
 Professor HARMON C. DUNATHAN***
 Associate Professor ROBERT M. GAVIN, JR.
 Associate Professor CLAUDE WINTNER
 Assistant Professor STEVEN S. HECHT
 Assistant Professor GEOFFREY MARTIN

The program in chemistry is designed to meet the needs of students who are pursuing chemistry for any of a variety of reasons. Introductory courses in the Department provide a broad introduction to the science of chemistry as one of the liberal arts. Intermediate and advanced courses provide sound preparation for a wide range of professional activities in the physical, biological, and medical sciences. At all levels extensive use is made of the wide range of instruments available for student use. (See section of catalog on "Facilities".)

The major program in chemistry recognizes that chemistry as a discipline occupies the broad area between physics and biology and has strong ties to both. Indeed, some of the most exciting areas in science today are found in the interdisciplinary fields of chemical physics and chemical biology. The department major allows the student maximum flexibility in designing a program which can be directed either toward one of these interdisciplinary areas or toward one of the more traditional areas of chemistry. This flexibility is apparent in the major requirements, which accept on an equal basis advanced courses in biology, chemistry, or physics.

This flexibility allows the major adviser and each student in consultation to plan a program which takes into account that student's interests and career aims. Students who are interested in graduate study in any of the three areas of departmental emphasis are strongly urged to go beyond the eight course program which constitutes the college major. Some typical programs which prepare for graduate study are given below:

Chemistry: Chemistry 107a, 108b, 202a, 203b, 301a, 302b, 307d, 307e, 306b, 309d, 309e, 355a, or 356b; Physics 113a, 114b; Mathematics 113a, 114b, or 119a. Russian or German language study is strongly advised.

***On sabbatical leave, 1970-71.

****On leave of absence, 1970-71.

Chemical Physics: Chemistry 107a, 108b, 202a, 203b, 301a, 304b, 306b; the former Physics 25 or the equivalent, and two advanced courses in either Physics or Physical Chemistry; Mathematics 113a, 114b, 220b, and 221a.

Chemical Biology: Chemistry 107a, 108b, 202a, 203b, 301a, 356b; Biology 100, 201b, 200a; Physics 113a, 114b; Mathematics 113a, 114b.

Pre-Medical Students: See the section of the catalog on preparation for professions. The usual requirement of four courses in Chemistry may be met by enrolling in Chemistry 107a, 108b, 202a, 203b.

All students taking their first course in the Department are required to take a placement examination given during freshman week. This examination, the results of advanced-placement tests, and school records will form the basis for placement in Chemistry. Students who are interested in the mathematically-based areas of chemistry may want to consider taking Physics 113a and Chemistry 202a as freshmen.

In addition to the course program, opportunities are offered for pursuit of laboratory research problems under faculty direction. These are described under Research Tutorials below.

MAJOR REQUIREMENTS

The following major requirements are applicable for the Class of 1973 and later. Requirements for the classes of 1971 and 1972 will be worked out in consultation with the Chemistry Department.

Chemistry 107a, 108b, 202b, 301a; Mathematics 113a, 114b (or 119a); Physics 113a or the former Physics 19; plus four advanced courses in Chemistry, Biology, or Physics. One of these advanced courses must be in the area of organic chemistry or biology and one must be in the area of physics or physical chemistry. Biology courses numbered 200 or above and Physics courses numbered 200 or above are defined as advanced courses. Reading courses and courses designed for non-scientists do not meet this requirement. Any requirement may be met by taking a course of equivalent level at Bryn Mawr.

It is advised that Physics 113a be completed by the middle of the sophomore year, to provide maximum flexibility in course planning during the junior and senior years.

A student must earn a grade of at least 70 in those courses listed as prerequisite to an advanced course in order to qualify for admission to the advanced course.

REQUIREMENTS FOR HONORS

Students who are considered qualified will be invited to become candidates for Departmental Honors during the second semester of the junior year. Honors candidates will be expected to do superior work in major courses and to complete a senior research problem at a level superior both in quality and quantity of effort to that expected in normal course work. Research work extending through two semesters is usually expected of a candidate for Departmental Honors. A final paper and oral presentation of the work will be expected.

101a ATOMS AND MOLECULES IN ISOLATION AND IN INTERACTION
Three lectures; no laboratory Mr. Hecht

Basic concepts of importance in the field of chemistry are developed. Both individual and bulk properties of atoms and molecules are considered, thus establishing a basis for an appreciation of the significance of chemical reactivity in a variety of situations. Open to students with no previous training in science.

107a THE CHEMISTRY OF THE LIGHT ELEMENTS I
Messrs. Gavin and MacKay

Four hours; three lectures and one laboratory

The molecular architecture, bond properties, and energetics of the compounds of elements from hydrogen to chlorine are examined and used to develop a unified analysis of their modes of chemical reactivity. Prerequisite: previous chemistry and assignment by the Department.

108b THE CHEMISTRY OF THE LIGHT ELEMENTS II Mr. Wintner
Four hours; three lectures and one laboratory

This course is an introduction to the chemistry of carbon, or organic chemistry. The properties of the common organic functional groups and the basic mechanistic concepts of organic chemistry are discussed. These properties are viewed within the context of the chemistry of the other light elements as developed in Chemistry 107a. Prerequisite: Chemistry 107a or consent of the instructor.

202b BASIC PRINCIPLES OF PHYSICAL CHEMISTRY Mr. MacKay
Four hours; three lectures and one laboratory period

A course designed to acquaint the student with basic areas of physical chemistry and to serve as the gateway to the area-oriented physical chemistry courses in the curriculum. Particular emphasis will be placed on solution thermodynamics and equilibria. Other topics include electrochemistry, colligative and phase properties, and chemical kinetics. Laboratory exercises will consist of the quantitative study of systems illustrating principles developed in the lectures. Prerequisite: Physics 113a or the former Physics 19 and Mathematics 113a or 119a.

203a TOPICS IN ORGANIC CHEMISTRY Mr. Wintner
Four hours; three lectures and one laboratory period

Topics in stereochemistry, reaction mechanisms, biochemistry, and natural-products chemistry will build on the fundamentals developed in Chemistry 107a, 108b. Prerequisite: Chemistry 108b.

208b TOPICS IN CHEMICAL SCIENCE Messrs. MacKay and Gavin

An examination of selected topics in chemistry of potential interest to those whose major interests lie outside the science division. Topics to be discussed will be announced prior to registration. No prerequisite. Not open to students who have taken chemistry, biology, or physics courses numbered 113a or higher.

Offered in 1971-72 and alternate years.

301a, 302b LABORATORY IN CHEMICAL STRUCTURE AND REACTIVITY Messrs. Hecht and Martin

Two laboratory periods

This course integrates inorganic, organic, and physical chemistry concepts in a broad laboratory study of structure and its relationship to chemical reactivity. A variety of spectroscopic methods are introduced as structural and analytical tools. Chemical kinetics, isotopic labeling, chromatography, and other physical methods are used in studies of reactions of inorganic and organic compounds. These include photochemical and enzyme-catalyzed reactions. The experiments are "open-ended" and students are encouraged to design their own approach to the questions investigated. Prerequisites: Chemistry 108b and Chemistry 202b.

303a,b QUANTUM MECHANICS AND SPECTROSCOPY Mr. Zimmerman

Offered at Bryn Mawr College.

304b ADVANCED PHYSICAL AND INSTRUMENTAL METHODS LABORATORY Staff

One lecture and two laboratory periods

Laboratory study of the applications of spectroscopic, X-ray, and other methods to the determination of molecular structure, and of the reactive and nonreactive interactions of molecules and ions. Prerequisites: Chemistry 202b and 306b which may be taken concurrently.

305d PRINCIPLES OF CHEMICAL KINETICS Mr. MacKay

Emphasis will be placed on microscopic properties and their significance for kinetics; on mechanism, and on models. Prerequisite: Chemistry 202b or the former Physics 19.

A half-course offered in 1970-71 and alternate years.

305e TOPICS IN PHYSICAL AND INORGANIC CHEMISTRY Staff

Variable content depending on interests of students and faculty. Topic for 1970-71: The Chemistry of the Transition Metals. Prerequisite: Chemistry 107a and 202b or Chemistry 107a and the former Physics 19.

A half-course offered in 1970-71 and alternate years.

306b QUANTUM CHEMISTRY Mr. Gavin

An introduction to quantum mechanics, with applications to problems in chemical bonding and molecular spectroscopy and structure. The computer is used in illustrative problem work. Prerequisite: Chemistry 202b or the former Physics 19.

307d CLASSICAL CHEMICAL THERMODYNAMICS Mr. Chesick

Emphasis is placed on a careful examination of the concepts central to thermodynamics, and on the internal structure and logic of the subject. Prerequisite: Chemistry 202b or the former Physics 19.

A half-course offered in 1971-72 and alternate years.

307e INTRODUCTION TO STATISTICAL MECHANICS Mr. Chesick

The foundations of the subject in mechanics and probability theory are discussed. From these foundations the thermodynamic functions are developed in a form which allows their computation from molecular properties. Emphasis is on the properties of gases. Prerequisite: Chemistry 202b or the former Physics 19.

A half-course offered in 1971-72 and alternate years.

309d,e TOPICS IN PHYSICAL AND INORGANIC CHEMISTRY Staff

Variable content depending on interests of students and faculty involved. Topics for 1970-71: 309d, Structure Determination by Scattering Methods; 309e, Group Theory and Its Applications to Chemistry. Prerequisite: Chemistry 202b or Physics 115a.

Two half-courses offered in 1970-71 and alternate years.

355a ADVANCED ORGANIC CHEMISTRY Messrs. Hecht and Wintner

Selected topics from the fields of stereochemistry and organic reaction mechanisms. Prerequisite: Chemistry 203a.

356b BIOCHEMICAL MECHANISMS Mr. Dunathan

The organic chemistry of proteins, polypeptides, and polynucleotides. The theory and mechanism of enzyme action. Selected biological problems of chemical interest. Prerequisite: Chemistry 203a.

Not offered in 1970-71.

Research Tutorials

Students with solid preparation in the Department's course work and a strong desire to do independent laboratory work may register for a research tutorial in an area of active faculty research. In these tutorials the student attempts to define and solve a research problem under the close supervision of a faculty member.

361a, 362b RESEARCH TUTORIAL IN PHYSICAL CHEMISTRY
Messrs. Chesick, Gavin, MacKay, and Martin

Directed research in problems of molecular structure determination, quantum chemistry, hot-atom chemistry, gas-phase reaction kinetics and photochemistry, or one of a selected group of topics in inorganic chemistry.

363a, 364b RESEARCH TUTORIAL IN ORGANIC CHEMISTRY
Messrs. Dunathan, Hecht, and Wintner

Directed research in areas of physical-organic chemistry and biochemistry. Topics include studies of the mechanism of action of enzymes, utilizing pyridoxal phosphate as a cofactor, and problems in free radical chemistry.



CLASSICS

Associate Professor DANIEL J. GILLIS, *Chairman*

Associate Professor JOSEPH R. RUSSO

Assistant Professor DISKIN CLAY

The Classics Department offers instruction in the language, literature, and civilization of the Greek and Roman peoples. Principal emphasis is laid upon meeting the Greek and Roman legacy through the medium of the original languages, but courses in Classical Civilization offer opportunities to study ancient history and literature in English translation.

Two major programs offer students an opportunity either to specialize in the ancient world or to follow the Classical Tradition into its later manifestations.

MAJOR REQUIREMENTS

Two major programs are available in this Department:

A. Classics Major: ten semester courses divided between Greek and Latin, of which two must be from Classics 301a, 302b, 303a, 304b; Classics 490b; a written examination in translation from Greek and Latin, to be taken at a time set by the Department, ordinarily not later than the second week of the second semester of the senior year. If a candidate fails this examination the Department will decide when he may repeat it.

B. Classics and the Classical Tradition Major: a specific program, to be approved by the Department, involving at least one ancient language and one modern field of study, and a substantial paper; eight semester courses in Greek or Latin; two semester courses in related fields in other departments; Classics 490b; a written examination in translation from Greek or Latin. If a candidate fails this examination the Department will decide when he may repeat it.

REQUIREMENTS FOR HONORS

A. Classics Major: an average of 85 or better in classics courses during the junior and senior years; a grade of 85 or better in the translation examinations; either a substantial paper written during the senior year and due on or before May 1 on a topic approved by the Department, or the completion of 300 pages of reading in Greek and Latin during the junior and senior years in addition to normal course assignments, the material to be chosen in consultation with the Department; a one-hour oral examination on Honors and course work.

B. Classics and the Classical Tradition Major: Requirements are the same as for Honors in Classics except that courses in the related field outside the Department are to be counted in computing the grade average; the student will not have the option of substituting reading in Latin and Greek for the paper, which may be substantial extension of the paper required for the Major; the oral examination will cover both ancient and later parts of the candidate's special field.

COURSES IN GREEK LANGUAGE AND LITERATURE

- 101a-102b ELEMENTARY GREEK Mr. Clay
Intensive study of the elements of the language, followed by reading of easy Greek prose and poetry.
- 201a INTRODUCTION TO GREEK LITERATURE Mr. Russo
Readings in Homer's *Odyssey*, with lectures and reports on the Homeric world. Prerequisite: Classics 101a-102b or the equivalent.
- 202b INTRODUCTION TO GREEK LITERATURE Mr. Russo
Reading of the major Greek poets of the centuries between Homer and Aeschylus. Prerequisite: Classics 201a or permission of the instructor.
- 301a GREEK LITERATURE OF THE FIFTH CENTURY: POETRY Mr. Russo
Reading of the Oedipus tragedies of Sophocles, plus critical study of his other plays in English translation. Prerequisite: Classics 201a or 202b or the equivalent.
Offered in 1970-71 and alternate years.
- 302b GREEK LITERATURE IN THE FIFTH CENTURY: PROSE Mr. Gillis
Readings in the *Histories* of Herodotus and Thucydides, with special attention to literary aspects of the works. Prerequisite: Classics 201a or 202b or the equivalent.
Offered in 1970-71 and alternate years.
- 303a, 304b GREEK LITERATURE IN THE FOURTH CENTURY: PROSE Staff
Study of Platonic dialogues, as dictated by the needs of the students enrolled. Students majoring in Classics will be afforded opportunities to practice Greek composition. May be repeated for credit with change of content. Prerequisite: Classics 201a or 202b or the equivalent. Classics 304b may be taken without 303a.

COURSES IN LATIN LANGUAGE AND LITERATURE

- 103a-104b ELEMENTARY LATIN Messrs. Gillis and Russo
Basic instruction in Latin declension and conjugation; then reading in Latin prose and poetry, with special emphasis on Ovid.
- 105a LATIN LITERATURE I: PROSE Mr. Gillis
Review of grammar and vocabulary; reading of five or six major orations of Cicero. Prerequisite: Classics 103a-104b or two or three years of preparatory Latin.
- 106b LATIN LITERATURE I: POETRY Mr. Clay
Readings in the *Aeneid* of Vergil. Prerequisites: Classics 103a-104b and 105a or 107a or the equivalent, at the discretion of the instructor.

107a LATIN LITERATURE II: PROSE Mr. Gillis
Readings in the *Agricola*, *Germania* and *Annales* of Tacitus. Prerequisite:
Classics 105a, 106b, or four years of preparatory Latin.

108b LATIN LITERATURE II: POETRY Mr. Clay
Readings in the Augustan poets.

203a LATIN LITERATURE III: POETRY Mr. Clay
Readings in the *De rerum natura* of Lucretius. Prerequisites at the discretion
of the instructor. This course may be repeated for credit with change of
content.

204b LATIN LITERATURE III: PROSE Mr. Gillis
Studies in the *Pro Caelio* and *De oratore* of Cicero. Prerequisites at the
discretion of the instructor. This course may be repeated for credit with
change of content.

COURSES IN CLASSICAL CIVILIZATION NOT REQUIRING THE USE OF GREEK OR LATIN

119a GREEK CIVILIZATION Mr. Luman
(Also called *History 119a* and *Religion 119a*; for course description see
History 119a.)

120b ROMAN CIVILIZATION Mr. Luman
(Also called *History 120b* and *Religion 120b*; for course description see
History 120b.)

208b SEMINAR IN CLASSICAL LITERATURE: "ODYSSEUS AND
ULYSSES" Mr. Russo
A close reading of Homer's *Odyssey* and James Joyce's *Ulysses*, in the hope
of answering such questions as:

- 1) To what extent does Joyce seem inspired by Homer's poem and in
what ways is his book like or unlike the *Odyssey*?
- 2) What is a novel, what is an epic, and which has Joyce written?
- 3) How does each author make language the artist's special tool for
expressing his view of the world man lives in, and an instrument for
relating himself to his tradition and at the same time going beyond it?

No prerequisites. Limited to twelve non-Freshman. Given annually with
change of topic. May be repeated for credit.

480 INDEPENDENT STUDY Staff
Prerequisites at the discretion of the instructor.

490b SENIOR DEPARTMENTAL STUDIES Staff

ECONOMICS

Professor HOLLAND HUNTER, *Chairman*

President JOHN R. COLEMAN

Assistant Professor SAMUEL GUBINS

Lecturer HELEN M. HUNTER

At Bryn Mawr

Professor JOSHUA C. HUBBARD, *Acting Chairman*

Associate Professor RICHARD B. DUBOFF

Lecturer SUSAN WACHTER

The work in economics provides a basis for understanding and evaluating the operation of the American economy and other types of economy. Concepts and analytic methods are presented as aids in formation of intelligent policy judgments. The introductory course, Economics 101a,b (a one-semester course offered each semester) is designed to give the kind of informed perspective on economic performance standards that should be part of a liberal education. The group of intermediate courses offers a fuller range of material on major topics in the field, designed to be useful to non-majors as well as majors. The group of advanced courses supplies a theoretical and methodological foundation for those who either expect to major in economics or to make use of economics in their professional careers. Majors are encouraged to take these courses in their sophomore or junior years, where practicable. In all courses students are exposed to the data and primary source material that underlie sound economic analysis, and are encouraged to apply oral, written, and computer methods in analyzing this evidence.

Students planning a career in economics, business, and management will find various economics courses useful as introductions to the mathematical methods and theoretical models that are now part of advanced professional training. In addition, it is recommended that students with these career interests include calculus, probability and statistics, and linear algebra in their course work.

The major research which is a requirement of the major may be carried out during the second half of the junior year or during the senior year as part of a research seminar or as work performed in Economics 480, 481.

MAJOR REQUIREMENTS

Economics 101a,b, 301a; two semester courses from 303a, 304b, 305b; three other semester courses, one of which is a reasonable course taken during the spring of the junior year or during the senior year; and three other approved courses in the social sciences or mathematics. The comprehensive examination involves a required written examination and, at the student's option, an oral examination.

REQUIREMENTS FOR HONORS

Plans for Honors work will usually be laid during a student's junior year. An Honors project will involve a paper of high quality, usually begun in a research seminar, together with an oral examination.

101a,b INTRODUCTION TO ECONOMICS Staff

Study of the institutions and principles of the American economy, with stress on the forces promoting stable growth with minimum inflation and unemployment. Analysis of the relationships that determine individual incomes and prices, the issues that arise in international economic affairs, and the problems of poverty at home and abroad. Diverse readings, class discussion, papers.

201a ECONOMIC HISTORY AND DEVELOPMENT Mr. DuBoff

Long-term trends in output, resources, technology; structure of consumption, production, distribution; foreign trade and finance; basic causes of economic growth and underdevelopment; the role of the state. Quantitative findings provide the points of departure. Prerequisite: Economics 101a, b.

202a LATIN AMERICAN ECONOMIC DEVELOPMENT Mrs. Wachter

A theoretical and empirical analysis in an historical setting of the factors which have led to the economic underdevelopment of Latin America. The interrelationship between political and social change and economic growth.

204b THE MODERN CORPORATION Mr. Coleman

Study of selected issues in the role of the corporation in the economy and society: pressures in decision-making, relations with government and labor, response to new social concerns, and development of leadership.

205b PRIVATE ENTERPRISE AND PUBLIC POLICY Mrs. Wachter

A theoretical and empirical analysis of the behavior of business firms and the structure of industrial markets in the U.S. economy; evaluation of the performance of these markets; social and political implications of public regulation of private enterprises. Prerequisite: Economics 101a, b.

206b INTERNATIONAL ECONOMIC THEORY AND POLICY

Current problems in international trade; the theory of trade; the balance of payments and the theory of disturbances and adjustment in the international economy; economic integration; the impact of growth in rich and poor countries on the development of the world economy. Prerequisite: Economics 101a, b.

Offered in 1971-72.

- 207a MONEY AND BANKING Mr. Hubbard
The development and present organization of the money and banking system of the United States; domestic and international problems of monetary theory and policy. Prerequisite: Economics 101a, b.
- 208b PUBLIC FINANCE AND FISCAL POLICY Mr. Hubbard
A study of local, state, and Federal revenues and expenditures with particular emphasis on the Federal budget; fiscal policy as a positive means of shaping public taxation and expenditure so as to contribute to a stable, full-employment economy. Prerequisite: Economics 101a, b.
- 209a ECONOMICS OF URBAN POVERTY Mr. Gubins
Study of economic aspects of urban poverty problems, investment in human resources, financing of urban services, relations between income and earnings; theoretical and empirical analysis of benefits and costs of poverty programs. Prerequisite: Economics 101a, b.
- 210a THE SOVIET SYSTEM Mr. Hunter
(Also called *Political Science 210a*)
An analysis of the structure and functioning of major Soviet economic, political, and social institutions. Current arrangements are studied as products of historical development. Present performance and prospects are evaluated. Prerequisite: two semester courses of economics, political science, or history.
Offered in 1970-71 and alternate years.
- 212b POLITICAL ECONOMY Mr. DuBoff
An analysis of contemporary capitalism as a socio-economic system. Free market, Keynesian, Marxist and Socialist theories are appraised. Readings may include Marx, Baran, Sweezy, Galbraith, Friedman and others. Prerequisite: Economics 101a, b.
- 214b ECONOMICS OF MINORITIES
An examination of economic and social indicators relating to national and local conditions; specific studies of labor and housing markets in the Black, Appalachian and American Indian communities. Theories of racial discrimination and poverty. Prerequisite: Economics 101a, b.
Offered in 1971-72.
- 216b WESTERN EUROPEAN ECONOMIC DEVELOPMENT Mr. DuBoff
Selected topics in the economic history of Britain, France, Germany, and Italy since 1760 are examined, both theoretically and empirically. Representative topics may include the "industrial revolution," technological change, demographic trends, the growth of international trade and finance, the impacts of the world wars, and the effects of national economic policies. Prerequisite: Economics 101a, b.
Offered in 1970-71 and alternate years.
- 218b SEMINAR IN LABOR RESOURCES Mr. Coleman
Selected issues in the functioning of labor markets and the development of human resources. Illustrative topics: frictions in labor markets from unskilled through professionals, ideology in contrasting work groups, rise and

status of labor unionism, public policy on collective bargaining, investment in education and training. Prerequisite: Economics 101a, b.

- 300b RESEARCH SEMINAR ON HUMAN RESOURCES,
POVERTY, AND URBAN ECONOMICS Mr. Gubins
Students will engage in independent, empirical research on manpower development, poverty, and urban problems of the Philadelphia region. Prerequisite: Economics 209a or permission of the instructor.

- 301a STATISTICAL METHODS IN ECONOMICS Mrs. Hunter
An introduction to the concepts and procedures that underlie the quantitative analysis of economic and other social data. Frequency distributions, probability and sampling, time series, index numbers, regression analysis, computer programming. Prerequisite: Economics 101a, b.

- 302b INTRODUCTION TO ECONOMETRICS Mrs. Hunter
Quantitative methods of economic analysis and forecasting are presented in class and then used by students in individual projects. Multiple regression analysis, econometric models, economic forecasting, use of maximization and input-output methods. Prerequisite: Economics 301a or permission of the instructor.

- 303a MACROECONOMIC ANALYSIS Mr. Gubins
Rigorous review of the theoretical foundations of income determination, monetary phenomena, and fluctuations in price level and employment. Introduction to dynamic processes. Prerequisite: Economics 101a, b.

- 304b MICROECONOMIC ANALYSIS Mr. Gubins
Systematic investigation of analytic relationships underlying consumer welfare, efficient resource allocation, ideal pricing, and the distribution of income. Half of the course is devoted to the application of microeconomic theory to current problems. Prerequisite: Economics 101a, b.

- 305b DEVELOPMENT ANALYSIS Mr. Hunter
Theoretical treatment of the structural changes associated with the process of economic development, especially in poor countries, and rigorous analysis of criteria for policy judgments in development programming. Introduction to input-output and linear programming methods. Prerequisite: Economics 101a, b.

- 307b RESEARCH SEMINAR ON COMMUNIST DEVELOPMENT Mr. Hunter
Students will investigate past or prospective development processes in the USSR, Eastern Europe, or China, selecting a conceptual or empirical problem and applying social sciences analytic methods. Prerequisite: Economics/Political Science 210a or permission of the instructor.

- 311a RESEARCH SEMINAR ON INTERNATIONAL TRADE
Student research will involve constructing measures of recent developments between trading nations, testing hypotheses using existing data and current statistical techniques, or attempting extensions of international trade theory. Prerequisite: Economics 206b or permission of the instructor.
Offered in 1971-72 and alternate years.

- 480, 481 INDEPENDENT STUDY Staff



ENGINEERING AND APPLIED SCIENCE

Professor THEODORE B. HETZEL, *Chairman*

Associate Professor THOMAS A. BENHAM

The newly revised and expanded program in Engineering and Applied Science is designed to provide a sound preparation for a career in engineering or industry by a combination of basic engineering courses with a broad range of those in the natural sciences, mathematics, social sciences, and humanities.

The creative aspects of engineering are emphasized by involving the student in development of special engineering projects, one at an elementary level in the sophomore year and another at an advanced level in the senior year. These laboratory projects in design and construction will take into account not only the technical but also the scientific and social implications of the project.

The introductory course is divided into two distinct elements. The first semester, planned primarily for engineering majors, concentrates on engineering design. The second is an introduction to automatic computation, for students in engineering and in the social and natural sciences as well. It will center around problems of numerical methods and procedures involving the use of linear algebra, differential and integral calculus, and elementary statistics, making extensive use of the College's IBM 360 digital computer.

The courses for the engineering major plus the general College requirements in the natural and social sciences and the humanities, together with several free electives, constitute a program such as is sometimes called "General Engineering" or "Engineering Administration."

Haverford graduates with a major in engineering who wish to carry on further technical training in engineering are granted advanced standing in undergraduate engineering schools or are admitted to graduate schools. Those engineering majors who seek employment in leading industrial firms have found that their preparation at Haverford has prepared them well for engineering employment as well as for future study and training.

Our students profit by opportunities to visit industrial plants and attend meetings of technical societies in the Philadelphia area.

MAJOR REQUIREMENTS

Engineering 210a, 240b, 250a, 260a, 320b, 480 a or b, 490; Mathematics 113a; Physics 113a; Economics 101a and 101b; three additional courses above the introductory level, from engineering, mathematics, or the natural sciences, chosen in consultation with the Engineering Department.

110a INTRODUCTION TO ENGINEERING DESIGN

Mr. Hetzel

One class and two laboratory periods

Principles and conventions of engineering graphics, including pictorial drawing and descriptive geometry; the materials and methods of production; the components of machines and their kinematic analysis. Prerequisite: consent of the instructor.

210a ANALYTICAL MECHANICS

Mr. Hetzel

A study of statics, kinematics, and dynamics; forces in equilibrium, friction, moments of inertia, plane motion, work and energy, impulse and momentum, mechanical vibrations. Prerequisite: consent of the instructor.

230a MATHEMATICAL METHODS IN ENGINEERING

Mr. Benham

Use of such advanced mathematical techniques as infinite series, transforms, Bessel functions, and complex variables. Problems are chosen from various fields of engineering. Prerequisites: Mathematics 113a; Physics 113a.

240b ENGINEERING DESIGN

Messrs. Benham and Hetzel

One class and two laboratory periods

The group will choose a feasible problem, consider the technical, economic, and social aspects; and invent, design, and construct a solution to the problem. Prerequisite: consent of the instructor.

250a INTRODUCTION TO ELECTRICAL ENGINEERING

Mr. Benham

Four hours, including one laboratory period

Direct and alternating current circuits and machines, transient phenomena. Engineering 230a recommended.

260b INTRODUCTION TO ELECTRONICS

Mr. Benham

Four hours, including one laboratory period

Electronic devices, magnetic and control circuits, radiation and detection of electromagnetic waves, transmission systems. Prerequisite: Engineering 250a.

220c INTRODUCTION TO AUTOMATIC COMPUTATION

Mr. Snyder

Two lectures and two hours of laboratory throughout the year, for one semester-course credit

Lectures will present basic mathematical material and the fundamentals of numerical analysis. Emphasis will be more on over-all viewpoints than on

particular techniques. The laboratory will consist of computer programming with problems drawn as far as possible from the student's major field. Prerequisite: Mathematics 113a or the equivalent.

Offered at Bryn Mawr as Mathematics 220c.

320b THERMODYNAMICS

Mr. Hetzel

A study of energy, its sources, liberation, transfer, and utilization; gases, vapors, and their mixtures; theoretical and actual thermodynamic cycles for power and refrigeration. Prerequisite: consent of the instructor.

330a MECHANICS OF MATERIALS

Mr. Hetzel

A study of beams, shafts, columns, vessels, and joints, acted upon by simple and combined stresses. Prerequisite: Engineering 210a and consent of the instructor.

340b INTERNAL COMBUSTION ENGINES

Mr. Hetzel

The thermodynamics, fluid flow, and performance of internal combustion engines; consideration of fuels, carburetion, injection, etc. and several laboratory investigations of engine performance. Prerequisite: Engineering 320b or consent of the instructor.

350a CIRCUIT THEORY

Mr. Benham

Four hours, including one laboratory period

Networks, resonance, integrating and differentiating systems, and filters. Prerequisite: Engineering 250a and 260b (which may be taken concurrently) or consent of the instructor.

Offered in 1970-71 and alternate years.

360b ADVANCED ELECTRONICS

Mr. Benham

Four hours, including one laboratory period

Amplifiers, rectifiers, oscillators, pulse-height analyzers. Prerequisite: Engineering 350a or consent of the instructor.

Offered in 1970-71 and alternate years.

370a COMMUNICATION THEORY

Mr. Benham

Review of communication systems; study of the theory and problems associated with noise; introduction to information theory. Prerequisite: consent of the instructor.

Offered in 1971-72 and alternate years.

480a,b INDEPENDENT STUDY

Messrs. Benham and Hetzel

Engineering majors are required to do at least one semester of individual work in some special field of investigation, such as the engineering of a project with consideration of its technical, industrial, commercial, and sociological aspects.

490 SENIOR DEPARTMENTAL STUDIES



ENGLISH

Professor ALFRED W. SATTERTHWAITE, *Chairman*

Professor JOHN A. LESTER, JR.

Professor JOHN ASHMEAD, JR.***

Professor EDGAR SMITH ROSE

Professor FRANK J. QUINN

Associate Professor DUNCAN ASWELL

Assistant Professor JAMES C. RANSOM***

Assistant Professor RICHARD LUBARSKY

Lecturer DORIS S. QUINN

The Department of English aims to make accessible to students their cultural heritage in English and to help them perfect their reading and writing skills. These aims are reciprocal. Only if students read well are they able to possess their heritage; only if they realize through literature the full resources of language will their own writing attain the desired level of effectiveness.

Many students who choose to major in English intend to pursue some aspect of the subject professionally: to proceed to graduate school, to teach literature, or to undertake a literary career. The program of the Department provides preliminary education for all these purposes. The study of literature in English is recommended likewise to those students who intend to enter a non-literary profession such as law, government service, the ministry, medicine, or business. The Department welcomes such students.

MAJOR REQUIREMENTS

A variety of major programs is available in the Department of English, limited only by the following provisions:

The details of each English major's program will be worked out with a member of the English faculty chosen by the student to act as his major adviser. Upon the chairman's approval, this program becomes a contract of academic work which the student will undertake in his junior and senior years. The contract may be revised on consultation with and approval of the student and faculty member concerned.

The program will include one semester of introductory work in the field (101a or 101b), English 398b, and at least seven other courses pertinent to advanced English studies. As many as two semesters of study of a foreign literature in the original language or classical literature in translation will be accepted toward the English major.

Normally the major in English will entail a concentration in English literature or in American literature or, in cooperation with appropriate departments,

***On sabbatical leave, 1970-71.

American Studies. Individual contracts with a consistent plan for some study in the literary tradition relevant to the student's special interests (including contracts in comparative literature) will be given sympathetic consideration.

The student's attention is called to the range and variety of types of literature and literary study which are offered in the English curriculum. In substance there are courses which study various literary periods in depth, others which concentrate on a major author or small group of authors, or inquire into a particular literary problem or a particular literary genre, or which deal with literary theory and criticism, the art of writing, and the art of the film. In procedure, courses variously involve lecture-discussion, seminar, project work, or independent reading. It is expected that the major in English will take advantage of this variety in offerings.

The nature of the English 398b course to be offered will be determined through an inquiry (in November of the senior year) which will consider the progress achieved by each student in the terms of his individual contract.

In November of each academic year the English faculty will meet with all English majors (and prospective majors) to discuss English Department courses proposed for the following year.

Courses in English taken at Bryn Mawr College (under the terms specified earlier in this catalog) may count toward the major.

The comprehensive examination will be determined individually, in consultation with the contract supervisor, with the approval of the Chairman of the Department.

Students who plan to proceed to graduate work are reminded that virtually all graduate schools require a reading knowledge of both French and German, and some of the leading ones require a knowledge of Latin, also, for the Ph.D. degree in English.

REQUIREMENTS FOR HONORS

Students whose work shows superior achievement will be invited to become Honors candidates at the end of their junior year. Candidates for Honors must achieve an overall average of 85 or better in English courses (including 398b) completed in their junior and senior years.

Each Honors candidate must submit a substantial paper which demonstrates his ability to handle critically and to present in scholarly fashion an acceptable literary subject. This paper must be in the hands of the chairman of the Department not later than May 1st of the student's senior year. To be accepted for Honors this paper must, in the judgment of the English faculty, reveal superior achievement.

Honors are awarded on the basis of achievement in courses, an Honors project, and the comprehensive examination. High Honors are granted on the further evidence of distinction in an oral examination.

101a,b THE READING OF LITERATURE

Staff

The course provides a disciplined grounding in the skills of appreciation, analysis, and interpretation. It will emphasize the close reading of a small number of exemplary texts, drama and films as well as poetry and fiction, with some secondary readings in theory and criticism. The course will

incorporate to some extent the tutorial and the stress on writing of the former English 11-12. A one-semester course offered in each semester. Required of all English majors, but not a prerequisite for English courses taken by non-majors.

121a GENERAL COURSE IN ENGLISH LITERATURE (I) THE HERO: PAST AND PRESENT Mr. Lester

A consideration, with variations, of the heroic life as seen in the English literary heritage; its pattern and meaning, in past and present.

Not offered in 1971-72.

122b GENERAL COURSE IN ENGLISH LITERATURE (II) Mr. Lester

Major figures in English literature from the early eighteenth century to the present.

Not offered in 1970-71.

133a LITERATURE OF THE ENGLISH RENAISSANCE (I) Mr. Ransom

A critical study of the literature of the Elizabethan age.

Offered in 1971-72 and alternate years.

134b LITERATURE OF THE ENGLISH RENAISSANCE (II)

Mr. Satterthwaite

A critical study of the literature of the late Elizabethan period through the early Stuart reigns.

Offered in 1971-72 and alternate years.

142a THE ART OF POETRY

Mr. Quinn

The analysis and interpretation of selected poems in terms of tone, image, metaphor, diction, prosody, theme, symbol, and myth. Enrollment limited to freshmen and sophomores.

147a LINGUISTICS, RHETORIC, AND LITERATURE

Mr. Ashmead

(See General Courses: Linguistics 147a)

Not offered in 1970-71.

221a THE RISE OF THE NOVEL

Mr. Rose

A concentrated study of selected works of fiction from Defoe to Austen, employing such concepts as plot, character, setting, theme, style, mimesis, and point of view.

222b THE DEVELOPMENT OF THE NOVEL

Mr. Lester

Narrative fiction from Austen to Joyce.

- 233a THE AGE OF MILTON Mr. Rose
Selected works by Milton in the context of metaphysical poetry, baroque prose, and Restoration drama.
- 234b THE NEOCLASSICAL MOVEMENT Mr. Satterthwaite
A study of some of the major works of Swift, Pope, and Johnson.
Offered in 1970-71 and alternate years.
- 245a AMERICAN LITERATURE AND AMERICAN STUDIES BEFORE 1890 Mr. Ashmead
An inquiry into the relationships of American literature and American culture mainly before 1890, centering on examination of a few related issues, forms, or topics, especially as these have relevance today.
Offered in 1971-72 and alternate years.
- 246b AMERICAN LITERATURE AND AMERICAN STUDIES SINCE 1890 Mr. Ashmead
An inquiry into the relationships of American literature and American culture since 1890, centering on examination of a few related issues, forms, or topics.
Offered in 1971-72 and alternate years.
- 255a SELECTED AMERICAN AUTHORS, ISSUES, AND LITERARY THEORIES, MAINLY BEFORE THE CIVIL WAR Mr. Aswell
An exploration of a few related authors and their works, especially as these mark significant and lasting new directions in American literature.
Offered in 1970-71 and alternate years.
- 256b SELECTED AMERICAN AUTHORS, ISSUES, AND LITERARY THEORIES, FROM THE CIVIL WAR TO WORLD WAR I Mr. Aswell
An exploration of a few related authors and their works, especially as these mark significant new directions in American literature. The specific topic will be announced each year the course is given.
Offered in 1970-71 and alternate years.
- 261a BLACK LITERATURE IN AMERICA Mr. Aswell
A study of black literary expression in various forms, with emphasis on works by W. E. B. DuBois, Richard Wright, Ralph Ellison, and LeRoi Jones. Some peripheral attention to certain white authors (such as Joel Chandler Harris and Gertrude Stein), for purposes of drawing specific and pointed comparisons. Enrollment limited.
- 270b SHAKESPEARE Mrs. Quinn
Extensive reading in Shakespeare's plays. Prerequisite: consent of instructor.

280b CREATIVE WRITING

Mr. Ashmead

Practice in writing imaginative literature. Chiefly confined to prose fiction. Regular assignments, class discussions, and personal conferences. Prerequisite: junior standing and consent of the instructor.

Not offered in 1970-71.

311a SOUTHERN LETTERS: 1919 TO THE PRESENT

Mr. Lubarsky

An examination of the flowering of Southern American literature after World War I, with particular emphasis on William Faulkner, John Crowe Ransom, Allen Tate, Robert Penn Warren, Thomas Wolfe, Flannery O'Connor, Eudora Welty, and John Barth. Enrollment limited. Prerequisite: a prior course in English or consent of the instructor.

333a THE ROMANTIC PERIOD

Mr. Ransom

Critical reading in the literature of the English romantic tradition. Prerequisite: consent of the instructor. Enrollment limited to juniors and seniors.

Not offered in 1970-71.

334b THE VICTORIAN PERIOD

Mr. Lester

Readings in the controversial, critical, and imaginative literature of the period. Prerequisite: consent of the instructor.

345a BRITISH LITERATURE OF THE TWENTIETH CENTURY

Mr. Quinn and Mrs. Quinn

Selected writers in poetry, prose, and drama. Prerequisite: two courses in English above the freshman level. Enrollment limited to juniors and seniors.

346b AMERICAN LITERATURE OF THE TWENTIETH CENTURY

Messrs. Aswell and Lubarsky

Selected writers in poetry, prose, and drama. Prerequisite: two courses in English above the freshman level. Enrollment limited to juniors and seniors.

351a LITERARY THEORY AND CRITICISM

Mr. Rose

(Also called Philosophy 351a)

A systematic exploration of various approaches to literature. Reading in aesthetics, criticism, and imaginative literature. Discussions and critical papers.

Not offered in 1970-71.

355a CHAUCER AND THE CHAUCERIANS

Mr. Quinn

A study of the *Canterbury Tales*, *Troilus and Criseyde*, Chaucer's prose, and the work of Henryson and Dunbar. Prerequisite: consent of the instructor. Enrollment limited.

- 361a TOPICS IN SHAKESPEARE Mr. Satterthwaite
Close study of a few plays. Seminar. Prerequisite: consent of the instructor. Enrollment limited.
- 364b TOPICS IN AMERICAN LITERATURE Mr. Rose
1970-71: T. S. Eliot. Prerequisite: consent of the instructor. Enrollment limited.
- 366b TOPICS IN AMERICAN LITERATURE Mr. Lubarsky
1970-71: American Drama and Film: Modern American drama from Eugene O'Neill to LeRoi Jones, with consideration of selected films which have been adapted from plays. The course will consider the theories of the two media, and the influence they have had on one another.
- 371a TOPICS IN ENGLISH LITERATURE Mr. Lester
1970-71: W. B. Yeats. Prerequisite: consent of the instructor. Enrollment limited.
- 375a TOPICS IN ENGLISH LITERATURE Mr. Satterthwaite
1970-71: Gerard Manley Hopkins. Prerequisite: consent of the instructor. Enrollment limited.
- 378b TOPICS IN ENGLISH LITERATURE Mr. Quinn
1970-71: James Joyce. Prerequisite: consent of the instructor. Enrollment limited.
- 398b SENIOR DEPARTMENTAL STUDIES Staff
A required course for majors, English 398b reviews the work of the program in preparation for the Comprehensive Examination. Procedure each year will be determined at a November inquiry (see under Major Requirements).
- 480 INDEPENDENT STUDY Staff
Project courses consist of individual study and writing under the supervision of a member of the department. They are available only to advanced students and are offered only at the discretion of individual teachers. Candidates for Honors are expected to undertake, in the last semester of the senior year, a project leading to the Honors paper.

FINE ARTS

Associate Professor CHARLES STEGEMAN, *Chairman*

Assistant Professor CHRISTOPHER CAIRNS

Professor THEODORE B. HETZEL

At Bryn Mawr

Associate Professor FRITZ JANSCHKA

The aims of the courses in the field of Fine Arts are dual:

- 1—For the students not majoring in Fine Arts:
to develop the visual sense to the point where it increases human perception, and to present to the student the knowledge and understanding of all art forms and their historical context.
- 2—For students intending to major:
beyond the foregoing, to promote thinking in visual terms and to foster the skills needed to give expression to these in a form of art.

MAJOR REQUIREMENTS

For those majoring in Painting or related two-dimensional disciplines: required courses: Fine Arts 101; two courses of Fine Arts 115a or b, 225a or b, 231a or b, 241a or b, 251a or b; Fine Arts 233a and b; Fine Arts 333a or b; Fine Arts 371a or b; Fine Arts 499, plus three Art History courses to be taken at Bryn Mawr.

For those majoring in Sculpture or related three-dimensional disciplines: required courses: Fine Arts 101; two courses of Fine Arts 115a or b, 224a or b, 231a or b, 241a or b, 251 a or b; Fine Arts 243a and b; Fine Arts 343a or b; Fine Arts 371a or b; Fine Arts 499, plus three Art History courses to be taken at Bryn Mawr.

101 FINE ARTS FOUNDATION PROGRAM Messrs. Cairns, Hetzel, Stegeman

Drawing—D; Painting—P; Photography—F; Sculpture—S

This course aims at introducing the student to at least three different disciplines from the four presently offered by the department: drawing, painting, photography and sculpture. Each subject will be an introductory course, dealing with the formal elements characteristic of the particular subject as well as the appropriate techniques. In discussing these disciplines their interrelationships will be shown. Part of the work will be from Life model in drawing, painting and sculpture. These subjects will be offered as half-semester courses; one can choose all four in either or both semesters for two course credits or any three for one and one-half credits.

The course will be structured so that the student experiences the differences as well as the similarities between the various expressions in art, thus affording a "perspective" insight into the visual process as a basis for artistic expression. Enrollment limited.

- 115a,b GRAPHIC ARTS Mr. Janschka
Offered at Bryn Mawr College.
- 225a,b ADVANCED DRAWING Mr. Janschka
Offered at Bryn Mawr College.
- 231a,b DRAWING ALL MEDIA Mr. Stegeman
 This course will deal with the various drawing media, such as charcoal, conté, pencil, ink and mixed media. It will explore the relationship between media, techniques and expression. The student will be exposed to the problems involving space, design and composition as well as "thinking" in two dimensions. Part of the work will be from Life model. May be repeated for credit. Prerequisites: Fine Arts 101 and consent of the instructor.
- 241a,b DRAWING ALL MEDIA Mr. Cairns
 This course will deal in essence with the same problems as Fine Arts 231a, b. However, some of the drawing media will be clay modeling in half-hour sketches; the space and design concepts solve three-dimensional problems. Part of the work will be done from Life model. May be repeated for credit. Prerequisites: Fine Arts 101 and consent of the instructor.
- 233a,b PAINTING: MATERIALS AND TECHNIQUES Mr. Stegeman
 This course will allow a thorough investigation of the problems of (1) form, color texture and their interrelationships, (2) influence of the various painting techniques upon the expression of a work, (3) the characteristics and limitations of the different media, (4) control over the structure and composition of a work of art, and (5) the relationships of form and composition, and color and composition. Media will be primarily oils but acrylics, water-colors and egg tempera will be explored. Part of the work will be from Life model. May be repeated for credit. Prerequisites: Fine Arts 101 and consent of the instructor. Enrollment limited.
- 243a,b SCULPTURE: MATERIALS AND TECHNIQUES Mr. Cairns
 This course will develop (1) the awareness of the behavior of objects in space, (2) the concepts and techniques leading up to the control of form in space, and (3) the characteristics and limitations of the various sculpture media and their influence on the final work. Clay modeling techniques will be used predominantly but not exclusively. Part of the work will be done from Life model. Students will learn fundamental casting techniques. May be repeated for credit. Prerequisites: Fine Arts 101 and consent of the instructor. Enrollment limited.
- 251a,b PHOTOGRAPHY Mr. Hetzel
 A course in the use of photography to record and express information and emotion. Basic camera techniques and black/white processing will be taught, but emphasis will be on the creation of prints. May be repeated for credit. Prerequisites: Fine Arts 101 and consent of the instructor. Enrollment limited.
- 333a,b EXPERIMENTAL STUDIO (PAINTING) Mr. Stegeman
 Prerequisites: Fine Arts 233a or b, and consent of the instructor. Enrollment limited.



343a,b EXPERIMENTAL STUDIO (SCULPTURE)

Mr. Cairns

In these studio courses the student is encouraged to experiment with ideas and techniques with the purpose of developing a personal expression. It is expected that the student will already have a sound knowledge of painting or sculpture techniques and is at the stage where personal expression has become possible. At the end of the semester the student will exhibit his project. May be repeated for credit. Prerequisites: Fine Arts 243a or b, and consent of the instructor. Enrollment limited.

371a,b ANALYSIS OF THE VISUAL VOCABULARY: PAINTING AND SCULPTURE SINCE WORLD WAR II

Mr. Stegeman

This illustrated lecture and discussion course aims at developing the visual sense; at establishing a link of understanding between things seen and perceived, and concepts; to analyze and understand the meaning of art; to know and evaluate the individual expression of artists of the last twenty-five years. May be repeated for credit. Enrollment limited to 50.

481a,b INDEPENDENT STUDY

Messrs. Cairns and Stegeman

This course gives the advanced student the opportunity to experiment with his concepts and ideas and to explore in depth his talent. Prerequisite: consent of the instructor.

499 SENIOR DEPARTMENTAL STUDIES

Staff

In this course the student reviews the depth and extent of his experience gained, and in so doing creates a body of work giving evidence of his achievement. At the end of the senior year the student is expected to produce—in essence—a one-man show of his work.

GENERAL COURSES

HUMANITIES 101 AND 102 THE WESTERN TRADITION

(Freshman Seminar)

A sequence of four semester courses enrolling 24 Freshmen who engage to remain in the course for the full two years. The first year which takes the form of a sequence of two freshman seminars, will be devoted to a study of the epic, the drama, philosophic and biblical writings spanning, roughly, the era from Gilgamesh to Augustine. The second year, moving from Dante to Freud, takes in some of the major literary, philosophic, and artistic achievement of the West in modern times. Visits to museums, a concert or two, a film extend the range of the course beyond the written work. Two instructors each year (four in all) will lead class discussions together and conduct tutorials separately. They will be drawn from Classics, Philosophy, History, and one other department.

Humanities 101 offered in 1971-72 and thereafter.

Humanities 102 offered in 1972-73 and thereafter.

HUMANITIES 201 INTERPRETATION OF LIFE IN WESTERN LITERATURE

Messrs. Butman and Lubarski

A study in their entirety of selected literary and philosophic works which are great imaginative presentations of attitudes toward life. The course spans Western culture from Homer to the present, and the readings are drawn from all the major literatures of the West, in the best available translations. Stress is laid on student involvement in issues raised by these books; consequently, the class work is handled entirely by the discussion method.

HUMANITIES 301 TWENTIETH CENTURY FICTION

Mr. Gutwirth

A reading of major works from Proust to Borges, by way of Joyce, Thomas Mann, and Italo Svevo. Individual students will be expected to take a leading part in the discussion of works falling within their major subjects. Faculty consultants will be called in from time to time to lecture or participate in the discussion of specialized topics. A reading knowledge of one foreign language relevant to the topic is required. Limited to 15 students. Prerequisite: consent of the instructor.

LINGUISTICS 308 INTRODUCTION TO LINGUISTICS

Miss Dorian

Language in the social context: human versus animal communication; childhood language acquisition; bi-lingualism; regional dialects; usage and the issue of "correctness"; social dialects; speech behavior and other cultures.

Offered at Bryn Mawr as Interdepartmental Course 308.

LINGUISTICS (ENGLISH) 147a LINGUISTICS, RHETORIC AND LITERATURE

Mr. Ashmead

An inquiry into applications of the new linguistics and the new rhetoric to the study, appreciation, and writing of literature. Each year the course will concentrate on a special topic, usually with the aid of visiting scholars.

Not offered in 1970-71.

PSYCHOLOGY/SOCIOLOGY 153d,e,g STATISTICS FOR THE SOCIAL SCIENCES Staff

A seven-week program designed to provide a basic level of insight into statistics: description of data sets, probability and sampling, and inference of population parameters from sample statistics. The specific statistics covered will be t-tests, correlation, chi-square and simple analysis of variance. Programmed and conventional tests will be used with particular attention to working problems.

SOCIAL SCIENCE 216a AFRICAN CIVILIZATION

Messrs. Glickman or Mortimer or MacGaffey

Selected problems in the study of culture and politics in Africa, with emphasis on a major country or region, different each year. In 1970-71: French-speaking Africa. Visits by artists, writers, academic commentators and statesmen. Research papers. Prerequisite: one year of social science and one year of humanities or consent of the instructor.

SOCIAL SCIENCE 262b THE AFRO-AMERICAN EXPERIENCE: SOUTH AMERICA AND THE CARIBBEAN Mr. Moore

A selective inquiry into the social and cultural experiences of black people. Particular attention to Brazil, Cuba, Haiti, Jamaica, Guyana and the Dominican Republic. Prerequisite: one year of social science and one year of humanities or consent of the instructor.

GERMAN

Professor JOHN R. CARY, *Chairman*

Assistant Professor EDWARD F. BAUER****

Assistant Professor ROBERT E. STIEFEL

Lecturer MARIA MARSHALL

The program of German is designed to enable the student to express himself in the spoken language, as well as to read, interpret, and write about the best and most representative German literature. From the early use of German in beginning classes to the investigation of style and structure in German literature, the student will become increasingly aware of the particular insights into human values and actions which one associates with authors like Goethe and Schiller, Kleist, Stifter, Kafka, Rilke, and Thomas Mann, and with epochs like early 19th century Romanticism or 20th century Expressionism. It is fair to assert that the German literary tradition forms an essential part of Western culture; acquaintance with that tradition should provide a heightened perception of the human condition and of artistic achievement.

****On leave, 1970-71.

German 011, 022 and 150a are primarily language courses. All students offering German for entrance are placed at the level where they presumably can profit best by the course, according to a placement test given by the Department. Work in the Department should be supplemented, whenever possible, by study in a language school or a university in Germany, Austria, or Switzerland.

The German Departments of Haverford College and Bryn Mawr College cooperate in order to offer the widest possible range of courses to students in both colleges.

MAJOR REQUIREMENTS

- a. German 150a or its equivalent; 151a, 152b; at least three courses at the 300 level (to be determined in consultation with the major adviser); 490.
- b. Two semester courses beyond the introductory level in some other department to be approved as related courses by the major supervisor.
- c. A comprehensive examination.

REQUIREMENTS FOR HONORS

Honors in German will be awarded on the basis of a consistently high performance in the literature courses and a grade of 85 or better in the comprehensive examination. High Honors will be awarded on the basis of a further oral examination.

011 BEGINNING GERMAN

Staff

The course consists of five class meetings per week in sections of approximately ten students. The first semester covers the entire grammar, and particularly stresses understanding, speaking, and writing of carefully controlled compositions. In the second semester increased importance is given to reading as the course progresses.

022 INTERMEDIATE GERMAN

Staff

The course consists of four class meetings per week in sections of approximately ten students. Attention is given to specific grammatical difficulties and to vocabulary building. Modern literary texts are used as the basis of further language instruction and for the acceleration of reading speed. Progress in the language is supplemented by guided essay writing and textual interpretation. Prerequisite: German 011 or a satisfactory performance on a placement test.

055 GERMAN READING COURSE

A special course designed for those who wish to acquire only a reading knowledge of German expository prose. The course may be used to fulfill the requirements of certain departments or graduate schools, but not the College foreign language requirement.

Offered in 1971-72 and alternate years.

150a ADVANCED TRAINING IN THE GERMAN LANGUAGE

Careful attention is given to the development of fluency in speaking and writing German. A variety of styles and readings will form the basis of

conversation, with a constant emphasis on an articulate and varied oral and written expression. Prerequisite: consent of the instructor.

151a, 152b INTRODUCTION TO THE GERMAN LITERARY TRADITION
Messrs. Cary and Stiefel

Representative works of the major genres and movements of German literature from its beginnings to the present. The course offers students with a reading knowledge of German a foundation in the techniques of literary analysis as well as an introduction to a major European literary tradition. Prerequisite: German 022 or the equivalent.

Fall term: From the beginnings through Goethe (800-1832) Mr. Cary

Spring term: From Romanticism to the present (1800-1970) Mr. Stiefel

351a GOETHE
Mr. Cary
Offered in 1971-72 and alternate years.

352a THE ROMANTIC MOVEMENT IN GERMAN LITERATURE, ART,
AND MUSIC
Mr. Cary
Lectures, discussions, and readings of major writers (Novalis, Tieck, Brentano, Hoffmann, Eichendorff, Heine), painters (Friedrich, Runge), and composers (Beethoven, Schubert, Schumann) of one of the most pervasive of all German cultural movements. Prerequisite: consent of the instructor.

355a STUDIES IN GERMAN LYRIC POETRY
Mr. Stiefel
In the first part of the semester the class will read poetry representative of the following authors: Walther von der Vogelweide, Andreas Gryphius, Goethe, Hölderlin, Heine, Hofmannsthal, Rilke, Brecht, Celan, and Biermann. In the latter part of the semester the class will choose, from among the above, one poet whose works they will examine at greater length. Prerequisite: consent of the instructor.
Offered in 1971-72 and alternate years.

356b THE GERMAN NOVELLE
Not offered in 1970-71.

358b AUSTRIAN LITERATURE, 1815-1930
Mr. Stiefel
Beginning with writings of Hugo von Hofmannsthal, we will seek to define the concept of a peculiarly Austrian literary tradition. Hofmannsthal's poetry, plays, and essays will lead us to a consideration of works by Raimund, Nestroy, Grillparzer, Stifter, and Schnitzler, as well as music by Mozart, Beethoven, and Mahler. Prerequisite: consent of the instructor.

480 INDEPENDENT STUDY
Staff
This course offers the student of German literature an opportunity to probe more deeply and more independently into a problem or an area in which he is particularly interested. The nature of the course will therefore vary to suit the needs of each individual student.

490 SENIOR DEPARTMENTAL STUDIES
Staff
Conferences on selected writers. Members of the Department will share in the conducting of the conferences, which will focus on the works of authors to be included on the comprehensive examination.

GERMAN LITERATURE IN TRANSLATION

273a THE 20TH CENTURY GERMAN NOVEL

The German novels of the 20th century mirror the spiritual crisis in Western society. The best of these novels belong to world literature, among them Rilke's *The Notebooks of Malte Laurids Brigge*, Mann's *Magic Mountain*, Hesse's *Glass Bead Game*, Kafka's *The Trial*, and Grass' *The Tin Drum*.
Not offered in 1970-71.

274b THREE COSMOLOGIES

Mr. Stiefel

A study of three epics, each of which is a major document of the German cultural tradition: Wolfram von Eschenbach's *Parzival* (c. 1200), Goethe's *Faust* (c. 1800), and Thomas Mann's *Joseph and his Brothers* (c. 1935). Reading in English or German; discussions in English.
Offered in 1971-72.

276b MUSICAL DRAMA IN AUSTRIA AND GERMANY, 1750 TO THE PRESENT

Mr. Stiefel

A literary and intellectual-historical study of dramatic texts written or adapted for music. Problems of musicology, dramaturgy, and stagecraft will be considered, according to the interests of the group assembled for the course. The list of works to be studied will include the *St. Matthew Passion* of Bach-Picander, *The Magic Flute* of Mozart-Schikaneder, *The Ring of the Nibelungen* by Wagner, selected writings of Nietzsche, *Elektra* and *Ariadne* by Strauss-Hofmannsthal, *Wozzeck* by Berg-Büchner, *Moses and Aron* by Schoenberg, and *Mahagonny* by Weil-Brecht. Conducted entirely in English, although students with a reading knowledge of German will be encouraged to turn to the original texts.
Offered in 1971-72.

277a THOMAS MANN'S *DOCTOR FAUSTUS* AND THE APOCALYPTIC VISION

Mr. Stiefel

A study of Thomas Mann's novel *Doctor Faustus* (1947) and some of its sources in the Bible, the Faust Book, Luther, Dürer, Shakespeare, Nietzsche, and Freud, in Monteverdi, Beethoven, Wagner, Mahler, and Schoenberg. We will read the novel at the beginning and at the end of the term; during the middle weeks we will consider the sources. We will also discuss parallel materials in selected films of Ingmar Bergman. Our studies will require us to consider problems in the nature of self-consciousness and to test seriously the proposition that our present culture is on the verge of collapse. Readings and discussion in English. Enrollment limited to 20; consent of the instructor required.

Offered in 1970-71 and alternate years.

278b EXPRESSIONISM IN GERMAN CULTURE

Mr. Cary

A study of Expressionism in various literary genres and in music and the visual arts. In addition to the movement itself, we will examine its historical roots by specialists in music and the visual arts. Lectures, discussion, and reading in English.



HISTORY

Professor JOHN P. SPIELMAN, JR., *Chairman*

Professor EDWIN B. BRONNER

Associate Professor ROGER LANE

Associate Professor JOHN W. McKENNA

Assistant Professor LINDA G. GERSTEIN

The study of history involves a reflective and critical analysis of human civilization through an investigation of a wide variety of its characteristic institutions. The curriculum in history is designed to encourage the development of both critical and reflective habits of mind by balancing emphasis on primary source materials with the study of important secondary works. While the Department emphasizes the western tradition, it welcomes comparative studies, and seeks to relate its courses to the broadest possible spectrum of academic disciplines.

While the Department has no specific language requirement, students who wish to major in history should note that some advanced courses require special preparation in foreign languages.

MAJOR REQUIREMENTS

History 111 plus eight additional semesters in history, which must include History 361f and History 399i (both of which are half-course units) and one topics course or independent study course involving a substantial written paper.

Four semesters in related departments. At least two of these must be courses above the introductory level.

Majors in history must take either a full year course at the intermediate level or at least one semester at the advanced level in three of the following fields: 1) Ancient History, 2) Medieval History, 3) Modern European History, 4) American History. With his adviser's approval a major may substitute appropriate courses in Latin American, African, Near or Far Eastern History for one of these fields.

History 361f and History 399i are required of all majors. Both are half-course units: the first, a seminar on the critical use of evidence, will normally be taken the first semester of the junior year; the second, a seminar on historiography, in the second semester of the senior year.

HONORS IN HISTORY

Honors in History will be granted to those senior majors who, in the Department's judgment have combined excellent performance in History courses with a good over-all record. A grade of 85 or above in a History course will be considered to represent work of Honors quality. High Honors may be awarded to students showing unusual distinction in meeting these criteria.

COOPERATION WITH BRYN MAWR COLLEGE

The History Departments of Haverford College and Bryn Mawr College cooperate in arranging their offerings so as to enrich as much as possible the opportunities available to students in both institutions. Several intermediate courses are offered jointly each year, alternating from one college to the other. Additional Bryn Mawr history courses open to Haverford students are listed at the end of this section.

111 INTRODUCTION TO WESTERN CIVILIZATION

Messrs. Lane, McKenna, Spielman and Mrs. Gerstein

A year course surveying Western European civilization from the fall of Rome to the present. The course deals with both institutional and intellectual currents in the western tradition. Conference discussions and lectures deal with both first-hand materials and secondary historical accounts. Open to freshmen and sophomores only.

119a GREEK CIVILIZATION

Mr. Luman

A general survey of Greek history from Minoan Crete to the fall of Corinth, 146 B.C., focusing on institutions, political and cultural life, social change and historiography. Lectures and discussions.

Offered in 1970-71 and alternate years.

120b ROMAN CIVILIZATION

Mr. Luman

A general survey of Roman history from the era of the foundation of the city to the death of Justinian the Great, concentrating on institutional, cultural and social history, with emphasis on the late Republic and the Empire.

Offered in 1970-71 and alternate years.

201 ENGLISH HISTORY

Mr. McKenna

The evolution of English institutions from Saxon times to the recent past.

Offered in 1970-71 and alternate years.

202 AMERICAN HISTORY

Mr. Lane

American history from colonial times to the present.

Offered in 1970-71 at Haverford, and in alternate years at Bryn Mawr.

203 MEDIEVAL EUROPE

Mr. McKenna

A topical survey of the medieval West from the reforms of Diocletian to the age of exploration. Particular emphasis on the development of political, economic, and religious institutions.

Offered in 1970-71 at Bryn Mawr, and in 1971-72 at Haverford.

204 REVOLUTIONARY EUROPE

Mr. Spielman

The political, intellectual, and technological revolutions in Europe from the late 18th century to 1848.

Not offered in 1970-71.

225 EUROPE SINCE 1848

Mrs. Gerstein

The main political, social, and cultural developments of the European states since the mid-19th century.

Offered in 1970-71 at Haverford, and in alternate years at Bryn Mawr.

- 227 THE AGE OF ABSOLUTISM Mr. Spielman
The emergence of the European state system from the early 17th century to the revolutions of the 18th century, including the revolutions in political and scientific thought.
Offered in 1970-71 and alternate years.
- 236b THE PROTESTANT REFORMATION Mr. Luman
(*See Religion 236b*)
- 240b HISTORY AND PRINCIPLES OF QUAKERISM Mr. Bronner
The Quaker Movement is studied in relation to other intellectual and religious movements of its time and in relation to problems of social reform. The development of dominant Quaker concepts is traced to the present day and critically examined. The course is designed for non-Friends as well as for Friends. Open without prerequisite to sophomores, juniors and seniors.
Offered in 1971-72 and alternate years.
- 241a THE IMPRESSIONIST ERA Mr. McCarthy
(*See French Civilization 241a*)
- 242b THE EIGHTEENTH CENTURY PHILOSOPHES
(*See French Civilization 242b*)
- 243b CONTEMPORARY FRANCE Mr. McCarthy
(*See French Civilization 243b*)
- 244 RUSSIAN HISTORY Mrs. Gerstein
A topical study of Russian history from Kiev to the death of Lenin. The first semester will deal with the problem of Russian medieval culture, the growth of Muscovite absolutism, and the impact of the West in the 18th century; the second semester will cover modernization, the growth of the radical intelligentsia and the Russian Revolution to 1924.
Offered in 1971-72.
- 340b TOPICS IN AMERICAN HISTORY Mr. Lane
Class discussions and papers based on readings in the sources and secondary works. May be repeated for credit with change of content. Topic for spring semester 1970-71: Interpretations of American History.
- 345a SEMINAR IN THE HISTORY OF WESTERN RELIGIOUS THOUGHT Mr. Luman
(*See Religion 345a*)
- 351a TOPICS IN REGIONAL HISTORY Mr. Bronner
May be repeated for credit with change of content. Topic for fall semester, 1970-71: The Delaware Valley.
- 352b RELIGIOUS UTOPIAN MOVEMENTS IN THE UNITED STATES Mr. Bronner
Utopian movements in the United States, with special emphasis on religious utopian thought and communities from colonial times to the present.
Offered in 1970-71 and alternate years.

- 355a TOPICS IN EUROPEAN HISTORY Mr. Spielman
Seminar meetings and an extensive research paper based on reading in primary and secondary sources. May be repeated for credit with change of topic. Topic for fall semester 1970-71: The French Revolution, 1789-1795. Prerequisite: a reading knowledge of French. Topic for fall semester 1971-72 to be announced.
- 356b TOPICS IN MODERN EUROPEAN HISTORY Mrs. Gerstein
Seminar meetings and papers based on readings in source materials and interpretive works. May be repeated for credit with change of content. Topic for spring semester 1970-71: The Russian Revolution of 1917. Prerequisite: History 111 or consent of the instructor.
- 357a TOPICS IN BRITISH HISTORY Mr. McKenna
Seminar meetings and a substantial paper. May be repeated for credit with change of content. Topic for fall semester 1970-71: Tudor England. Prerequisite: consent of instructor.
Offered in 1970-71 and alternate years.
- 358b TOPICS IN MEDIEVAL HISTORY Mr. McKenna
Seminar meetings and a substantial paper based chiefly on contemporary sources in translation. May be repeated for credit with change of content. Topic for 1971-72 to be announced. Prerequisite: History 111 or consent of the instructor.
Offered in 1971-72 and alternate years.
- 361f SEMINAR ON HISTORICAL EVIDENCE Staff
Occasional seminar meetings to discuss the nature of historical evidence and critical techniques for handling it; discussions and papers on mute evidence, written sources and the critical edition of a manuscript source. A half-course unit, enrollment limited to history majors for whom this is a required course.
- 399i SENIOR DEPARTMENTAL STUDIES Staff
Occasional seminar meetings and papers exploring problems of historical interpretation; final oral examination. A half-course unit, enrollment limited to senior majors in history for whom this is a required course.
- 480a,b,f,i INDEPENDENT STUDY Staff

COURSES OFFERED AT BRYN MAWR

- | | | |
|------|------------------------------|--------------|
| 209 | EARLY AMERICAN HISTORY | Mrs. Dunn |
| 211b | MEDIEVAL MEDITERRANEAN | Mr. Brand |
| 230 | AFRO-AMERICAN HISTORY | Mr. Aptheker |
| 302 | FRANCE 1559-1661 | Mr. Salmon |
| 303 | RECENT AMERICAN HISTORY | Mr. Dudden |
| 305 | ITALIAN RENAISSANCE | Mrs. Lane |
| 310b | MEXICO | Mrs. Dunn |
| 314 | HISTORY OF SCIENCE | Mr. Culotta |
| 320a | HOLLAND'S GOLDEN AGE | Mr. Tanis |
| 321b | REVOLUTION WITHIN THE CHURCH | Mr. Tanis |

MATHEMATICS

Professor DALE H. HUSEMOLLER, *Chairman*

Assistant Professor HARRY J. ROSENZWEIG

Assistant Professor FRANCIS X. CONNOLLY

Assistant Professor JOSEPH NEISENDORFER†

Instructor PETER ATWOOD

The aims of courses in mathematics are: (1) to promote rigorous thinking in a systematic, deductive, intellectual discipline; (2) to present to the student the direction and scope of mathematical development; (3) to foster technical competence in mathematics as an aid to the better comprehension of the physical, biological, and social sciences; and (4) to guide and direct the mathematics majors toward an interest in mathematical research.

The following sequences are open to qualified entering students: 113a, 114b; 113a, 116b; 113a, 118b; 113a, 114b, 118b; and 119a, 220b. Students will be sectioned according to their previous background. Students with the equivalent of one or two semesters of college calculus may be admitted to Mathematics 119a upon consent of the Department.

The more advanced courses cover work in the fields of analysis, algebra, and topology. The student majoring in the Department extends his studies into all of these areas.

A program consisting of Mathematics 113a, 114b, 220b and 221a is especially suited for the needs of the physical sciences, while Mathematics 118b deals with those concepts of statistics and probability which are fundamental to the biological and social sciences. Mathematics 116b is especially appropriate for the general liberal-arts student.

MAJOR REQUIREMENTS

Mathematics 221a, 222b, 331a, 332b, 333a, 334b, 335a, 336b, 399b, and either 361a, 362b or 363a, f, 364b, i. Recommended collateral courses are Physics 115a, 118b, 213a; Astronomy 211a; Economics 301a or for prospective actuaries, Economics 101a, 102b, 301a.

Prescribed parallel reading on the history and general principles of mathematics. Two written comprehensive examinations, each three hours in length.

It is recommended that facility in reading French and German be acquired early in the college course.

†Appointed on the Sloan Foundation Grant.

REQUIREMENTS FOR HONORS

Honors will be granted to those senior Mathematics majors who, by means of their course work and the comprehensive examinations, have given evidence of their ability, initiative, and interest in the study of mathematics. High Honors will be awarded to the exceptionally able student.

113a ONE-VARIABLE CALCULUS

Messrs. Atwood, Connolly and Neisendorfer

Differentiation and integration of functions of one variable. Applications: Taylor's formula and series. Elementary differential equations.

114b MULTI-DIMENSIONAL CALCULUS AND LINEAR ALGEBRA Staff

Vectors in n -space; partial derivatives; multiple integrals; theorems of Green and Stokes; divergence theorem; introduction to linear algebra. Prerequisite: Mathematics 113a.

116b TOPICS IN MATHEMATICS

Staff

A survey of topics in mathematics, including number theory, set theory, topology, geometry, probability, and game theory. The historical and philosophical aspects of mathematics will be emphasized.

118b PROBABILITY AND STATISTICS

Staff

Introduction to probability with applications to statistics; least squares approximations; general properties of distribution functions. Prerequisite: Mathematics 113a.

119a CALCULUS AND ANALYSIS

Mr. Rosenzweig

Review of calculus; series; partial derivatives and multiple integrals; introduction to linear algebra. Open to students with a background in calculus, but not open to those who have taken Mathematics 113a or 114b. Prerequisite: consent of the instructor.

220b ELEMENTARY COMPLEX ANALYSIS

Mr. Rosenzweig

Line integrals; complex derivatives; Cauchy theorem and residue calculations; elementary conformal mapping; harmonic functions; introduction to Laplace transforms. Prerequisite: Mathematics 119a or 114b.

221a LINEAR ALGEBRA

Mr. Husemoller

Groups; vector spaces; linear transformations; matrices; eigenvalues and eigenvectors; inner-product spaces; multilinear algebra. Prerequisite: Mathematics 114b or 119a.

222b ANALYSIS I

Mr. Husemoller

The real number field; rigorous development of differential and integral calculus; metric spaces; fundamental theorem of ordinary differential equations. Prerequisite: Mathematics 221a.

331a, 332b ANALYSIS II, III

Mr. Atwood

Differential calculus on Euclidean space; inverse and implicit function theorems; the Riemann and Lebesgue integrals; manifolds; Stokes theorem on manifolds; calculus of variations. Prerequisites: Mathematics 221a and 222b.

333a, 334b ALGEBRA

Mr. Connolly

Topics from field theory, ideal theory of commutative rings, group theory, structure of rings. Examples to illustrate the theory will be drawn from Mathematics 221a. Prerequisites: Mathematics 221a and 222b.

335a, 336b TOPOLOGY

Mr. Rosenzweig

General topology. Homotopy theory and fibre bundles; singular homology theory. Prerequisites: Mathematics 221a and 222b.

361a, 362b SPECIAL TOPICS IN ALGEBRA AND TOPOLOGY

Mr. Husemoller

In 1970-71 the course will cover topics in covering spaces, Riemann surfaces, algebraic curves and singularities. Prerequisites: Mathematics 220a and Mathematics 333a, 334b or consent of the instructor.

363a,f, 364b,i SPECIAL TOPICS IN ANALYSIS AND GEOMETRY

Mr. Husemoller

Half-course each term on the representation theory of finite groups the first term and Lie groups and algebras the second term. Prerequisite: consent of the instructor.

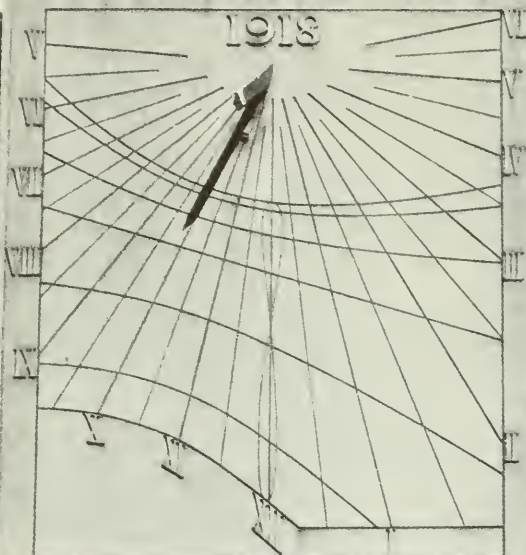
399b SENIOR DEPARTMENTAL STUDIES

Staff

Review and correlation of the various branches of mathematics. Content varies to fit student needs. This course may be taught as a seminar, a tutorial, or a lecture course, depending on student needs.

ANALEMMATIC DIAL

1918



PEREUNT ET IMPUTANTUR

MUSIC

Professor JOHN H. DAVISON, *Chairman*

Professor WILLIAM H. REESE

Professor ALFRED J. SWAN†

Lecturer HAROLD BOATRIFE

Lecturer TEMPLE PAINTER

The courses offered in music have as their objectives (1) the mastery of music materials and theory through the disciplines of counterpoint, harmony, and analysis, and subsequently (2) the stimulation of the creative energies of the student through musical composition, (3) a knowledge of the styles and literature of a great art with its interrelation of trends, influences, aesthetic principles, personalities, and creative processes over the centuries, and (4) the development of perceptive listening and refined hearing in connection with the aims stated above. The furthering and strengthening of the disciplines of music theory, performance and history is of value both to the general student and to the student with specialized musical interest and talent. For the latter, instruction in instrument or voice may be elected under Music 117a, 118b. Advanced and specialized work in musicology is available in the form of supplementary courses at Bryn Mawr and Swarthmore Colleges and the University of Pennsylvania. At Haverford the program seeks in part to stimulate free composition in the vocal and instrumental forms with a view to public performance of a successfully completed work.

MAJOR REQUIREMENTS

A rounded course of study of music includes (1) work in theory, possibly embracing composition, (2) the study of music history, (3) direct expression in music through the medium of instrument or voice, and minimal ability in the use of the keyboard. The Music major will work in both academic fields of theory and history, specializing in one of them.

Required courses: For specialization in music theory and composition: Music 011a or 012b, 113a-114b, 211a or 212b, 213a, 214b, 313a, 480, 490. For specialization in music history: Music 011a or 012b, 113a-114b, 211a, 212b, 213a or 214b, 480, 490.

Supporting courses are to be arranged in such related fields of the humanities, history, language, history of art, and others, as may be approved by the Department.

In addition the Music major is expected to reveal a proficiency and interest in instrumental playing and/or choral singing to the degree of participating actively

†On appointment first semester 1970-71.

in public performances from time to time during his college career. This will assure his having a direct experience with the living practice of a creative art. In addition, he must demonstrate a keyboard facility sufficient to encompass the needs of his theoretical and compositional studies.

For those specializing in music theory and composition, the comprehensive examination for majors will consist of: (1) the completion by the candidate of a musical composition for instruments or voices in one of the larger forms, (2) an examination in music history, (3) an examination in music theory including harmony, counterpoint, analysis, dictation, and keyboard harmony.

For those specializing in music history, the comprehensive examination for majors will consist of: (1) an examination in music history, (2) analysis of a work and other exercises involving theoretical musical knowledge, (3) the completion of a paper on an assigned subject in music history.

REQUIREMENTS FOR HONORS

The Honors candidate must perform satisfactorily in all required courses for music majors, and submit (a) in the case of specialization in composition, an orchestral composition of considerable stature showing creative talent as well as technical craftsmanship, and hence being worthy of a public performance, or (b) in the case of specialization in music history, a successfully completed project in musicological research, demonstrating mastery of the tools of this discipline, involving original thought, and showing ability in the creative interpretation of assorted materials bearing on a specific subject.

011a INTRODUCTION TO MUSIC HISTORY

Mr. Reese

A study of the principal forms of musical literature of the 17th, 18th, and 19th centuries. No previous knowledge of music is required.

012b SURVEY OF MUSIC HISTORY

Staff

A historical survey of the development of musical thought from the plain-song era to contemporary idioms. This course complements Music 011a but may be taken without it. No prerequisite.

113a-114b ELEMENTARY MUSIC THEORY Messrs. Davison and Boatrite

The basic materials of music: melody, scales, intervals, chords, meter, and rhythm. Counterpoint in two and three parts and harmony in four parts will be studied and implemented by ear-training, dictation, sightsinging, and analysis. Previous instruction or experience in some aspect of music is desirable.

115a, 116b SEMINARS IN ANALYSIS AND PERFORMANCE PRACTICE

Messrs. Davison and Painter

The work of this course will consist of (1) regular performance in a choral, orchestral, or chamber-music group under the Department of Music and (2) classwork involving analysis of the music being performed by these groups in any given semester, as well as related repertoire, with attention given to problems of performance practice. Prerequisites: one semester of study in a music-theory or music-history course and consent of the instructor.

211a, 212b SEMINARS IN MUSIC HISTORY

Staff

The detailed study of certain epochs in music history or of the works of individual composers having special significance in the history of music. The content of Music 211a, 212b will be altered from year to year so that a diversity of subject matter will be available. It may be repeated for credit, with change of content. Prerequisite: Music 011a or 012b or the equivalent. Topics for 1970-71:

Music 211a: The Music of Russia.

Mr. Swan

Music 212b: The Music of J. S. Bach.

Mr. Reese

117a, 118b PRIVATE MUSIC STUDY

Private lessons (instrumental, vocal) to be arranged with the Department Chairman.

Academic credit may be granted for private instrumental or vocal study under the following circumstances:

- 1) The instructor must be approved by the Provost and the Music Department Chairman, to whom he will submit a detailed report of the student's work at the end of each semester.
- 2) The student must demonstrate his accomplishment in his chosen field of study at an audition before members of the music faculty, or at a public recital.

A short paper pertaining to the repertoire studied may be required. Prerequisite: One semester of study in a music-theory or music-history course or the equivalent. The lessons will be at the student's own expense; in case of financial need, loans from the College may be arranged.

213a, 214b ADVANCED THEORY AND COMPOSITION

Messrs. Boatrite and Davison

A continuation of Music 113a-114b, involving ear-training, keyboard harmony, sightsinging, analysis, and composition, along with an introductory study of strict counterpoint as exemplified in the vocal style of the sixteenth century. In the second semester pieces are written in the eighteenth-century forms of the chorale-prelude, fugue, suite, and sonatina. Successful student compositions will be performed at demonstration concerts. Prerequisite: Music 113a-114b.

313a OPERA

Mr. Reese

A brief history, with concentrated investigation of representative works and theories. Lectures, reading, analysis, reports. Prerequisite: Music 011a or 012b or the equivalent.

Not offered in 1970-71.

312b SEMINAR IN 20th-CENTURY MUSIC THEORY AND PRACTICE

Mr. Boatrite

Practical emphasis will be given to analysis of works of representative composers such as Hindemith, Schönberg, and Bartók. Prerequisite: Music 214b.

480 INDEPENDENT STUDY-PROJECTS IN MUSIC

Staff

490 SENIOR DEPARTMENTAL STUDIES

Staff



PHILOSOPHY

Professor RICHARD J. BERNSTEIN, *Chairman*

Professor PAUL J. R. DESJARDINS*

Associate Professor L. ARYEH KOSMAN

Associate Professor JOSIAH D. THOMPSON, JR.

Assistant Professor ASOKA GANGADEAN

Assistant Professor ANDRZEJ ZABLUDOWSKI†

The philosophy curriculum has three major aims. In the first place, it attempts to help each student develop a more self-critical attitude toward life and the world by means of a confrontation with the thought of great philosophers of the past and present. The student is introduced to philosophical treatments of such problems as the nature of individual and social man, the nature of the world in which he lives, and the nature of his apprehension of, and response to, that world. Secondly, the philosophy curriculum is meant to help each student acquire philosophical materials and skills which supplement and help integrate his other studies, in the arts, the social sciences, the natural sciences, or religion. Finally, the philosophy curriculum is designed to offer certain students a foundation in knowledge and technique for further studies in philosophy or related fields at the graduate level.

All philosophy majors are expected to have a reading knowledge of at least one foreign language. Some advanced philosophy courses may require reading knowledge of a foreign language as a prerequisite for admission.

MAJOR REQUIREMENTS

Philosophy 101 (or equivalent), 399b, and eight other semester courses approved by the major supervisor, four from the Philosophy Department and four from some other department or departments closely related to the student's special study in philosophy.

A written comprehensive examination and an oral examination. The written examination will cover the history of philosophy, ethics, social and political philosophy, philosophy of religion, logic, metaphysics, the theory of knowledge, and philosophy of science. The oral examination will be based on the written examination.

REQUIREMENTS FOR HONORS

Honors in philosophy are awarded for special work of high quality, usually in the form of a thesis, on an important topic, problem, or philosopher approved by the major supervisor. One or more project courses may be used toward this

*On sabbatical leave, first semester, 1970-71.

†Appointed on the Sloan Foundation Grant.

end. Honors will not be given unless the candidate has an average grade of at least 85 in the comprehensive examination; High Honors require an average of at least 90.

101 HISTORICAL INTRODUCTION TO PHILOSOPHY

Staff

An understanding of the nature and functions of philosophy and its relations to other fundamental human concerns, such as religion, the sciences, and the arts, is sought through a study of selected works of the great philosophers in Western history. No prerequisite. Closed to juniors and seniors except in special cases.

103 THE ORIGINS OF PHILOSOPHY

Mr. Desjardins

The relative functions of myth, logic, and history in Homer, Hesiod, the Pre-Socratics. These themes will be investigated in three non-Western cultures: Chinese, Japanese, Dogon. Prerequisite: permission of the instructor. *Not offered in 1970-71.*

105 PHILOSOPHY: EAST AND WEST

Mr. Desjardins

Critical examination of theories about the differences between East and West in light of selected classical texts: Plato's *Republic*, the Confucian *Corpus*, the *Tao Te Ching*, and some early Chinese, Japanese, and Buddhist literature. Prerequisite: permission of the instructor. *Offered in 1971-72 and alternate years.*

107a LOGIC

Mr. Gangadean

Examination of classical term logic (syllogistic inference, categorical syllogisms), propositional logic (truth-function theory), and introduction to quantification theory. The interrelations between these will be examined. Stress will be on logic as a theory of discourse—the connection between logic and language will be explored. The above logical theories will be applied to inferences and arguments in ordinary discourse. Examination of validity, formal proof, and properties of a formal system. Some attention will be given to inductive inference. Prerequisite: permission of the instructor.

108b ADVANCED LOGIC

Mr. Davidon

A study of the capabilities and limitations of algorithms for proving or refuting conjectures formulated in a first-order predicate logic. Topics considered include the Gödel completeness and incompleteness theorems, decidable and undecidable theories, and the use of computers for proof searches. Some aspects of the foundations of mathematics will be explored. Prerequisite: permission of the instructor.

201a PLATO

Mr. Desjardins

A study of a selected group of the Dialogues. Prerequisite: permission of the instructor.

During 1970-71, this course will be offered in the second semester as 201b.

- 204b ARISTOTLE Mr. Kosman
 A study of a selection of the primary works of Aristotle. Prerequisite: Philosophy 101.
Offered in 1970-71 in the first semester as 204a.
- 225a, 226b RELIGIOUS TRADITIONS IN INDIA: ANCIENT AND MODERN Mr. Long
(See Religion 225a, 226b)
- 229a RELIGIOUS IDEAS IN MODERN CULTURE Mr. Long
(See Religion 229a)
- 301 EARLY MODERN PHILOSOPHY Mr. Kosman
 A study of the development of philosophic thought in the seventeenth and eighteenth centuries. Attention will be focused on the writings of representative thinkers. Selections from some of the following: Bacon, Locke, Berkeley, Hume, Descartes, Spinoza, Leibnitz. Prerequisite: permission of the instructor.
Offered in 1970-71 in the second semester as 301b.
- 303a GREEK PHILOSOPHIC TEXTS Mr. Kosman
 A close analysis of Greek philosophic writings. Prerequisite: Classics 101a or permission of the instructor.
Not offered in 1970-71.
- 334b KANT
 A study of selected major texts with special emphasis on the first *Critique*. Prerequisite: permission of the instructor.
Offered in 1971-72 and alternate years.
- 337a RELIGIOUS ETHICS Mr. Stark
(See Religion 337a)
- 338a PHILOSOPHY OF RELIGION Mr. Stark
(See Religion 338a)
- 309a PHILOSOPHY OF SCIENCE Mr. Zabłudowski
 A study of important philosophical issues raised by the sciences concerning, among other topics, the nature of scientific explanation and knowledge, law and chance, theory and observation, causality, purpose, freedom and determinism. This course is specifically designed for students without substantial background in natural science. Natural science majors and other students with a substantial background in the natural sciences are referred to Philosophy 356b: The Logic of Explanation. Prerequisite: permission of the instructor.

343 HEGEL AND POST-HEGELIAN THINKERS

Messrs. Bernstein and Spiegler

After a brief review of selected Hegelian texts in their cultural milieu, the course of 19th and 20th century philosophy will be examined. Principal texts from some of the following movements will be studied: Marxism, Existentialism, Phenomenology, and Analytic Philosophy. Prerequisite: permission of the instructor.

345a THE PHILOSOPHY OF EXISTENCE

Mr. Thompson

A study of some of the principal texts of nineteenth-century existentialism.

Readings in Kierkegaard or Nietzsche. Prerequisite: permission of the instructor.

346a THE PHENOMENOLOGY OF EXISTENCE

Mr. Thompson

A study of selected texts in 20th century phenomenology. Readings in Heidegger, Sartre, or Merleau-Ponty. Prerequisite: permission of the instructor.

348a PHILOSOPHY OF LOGIC

Mr. Gangadean

The focus will be on logic as an organon for philosophy. Theory of predication will be compared and contrasted with propositional logic and quantification theory. The effectiveness of each as an instrument for dealing with typical philosophical questions arising out of ordinary language as well as typical metaphysical and ontological questions will be discussed. Such meta-logical issues as the relation between intensional and extensional logic, between meta-language and object language, between propositional negation and predicate denial, between propositional and predicative truth, etc., will be examined. Selected writings of Aristotle, Frege, Russell, Ramsey, Quine, Strawson, and Sommers will be studied. Prerequisite: Philosophy 107a or permission of the instructor.

348b PHILOSOPHY OF LOGIC

Mr. Gangadean

Topic for 1970-71: The Logic of Language

An investigation into the nature and structure of language from the perspectives of logical theory and linguistic theory (i.e., empirical linguistics and the generative and transformational approach to syntax). Such topics as the syntactic, semantic and pragmatic dimensions of language, theory of predication, theory of types and categories, tree-theory for natural language, theory of negation, etc., are explored. Writings of Frege, Russell, Wittgenstein, Quine, Sommers, Chomsky, Fodor, Katz, and others are examined.

351a LITERARY THEORY AND CRITICISM

Mr. Rose

(See English 351a)

Not offered in 1970-71.

350b MODERN ANALYTIC PHILOSOPHY

Mr. Kosman

A study of the historical and theoretical development of analytic philosophy

in England and America. Selected writings of Russell, Wittgenstein, Ayer, Wisdom, and others, with special emphasis on theory of language. Prerequisite: permission of the instructor.

352b METAPHYSICS AND EPISTEMOLOGY

Mr. Gangadean

A critical examination of classical and recent conceptions of being and existence, and of the nature and possibility of metaphysics. Such topics as methodology of metaphysical analysis, the relation between the structure of thought and the structure of reality, ontology; the nature and formation of categories and conceptual frameworks, the relation between metaphysics and science, etc., are explored. Writings of Plato, Aristotle, Descartes, Kant, Heidegger, Strawson, Sommers, and others are studied.

Offered in 1971-72.

353a SOCIAL PHILOSOPHY

Mr. Thompson

A critical exploration of the web of problems that concern man's place in society. Classical approaches will be studied and the student will be encouraged to apply these approaches to the understanding of the salient social problems of his time. Prerequisite: permission of the instructor.

354b CONTEMPORARY PHILOSOPHIC PROBLEMS

Mr. Bernstein

A study of contemporary treatments of philosophic problems in Europe and America. Prerequisite: permission of the instructor.

356b THE LOGIC OF EXPLANATION

Mr. Zabłudowski

A study of what the sciences have to say about the nature of the physical world and the inquiring mind within it. Some of the topics discussed will be the same as those mentioned in Philosophy 309a: Philosophy of Science. But, unlike Philosophy 309a, this course is specifically designed for natural-science majors and other students with a greater background in the natural sciences. Prerequisite: permission of the instructor.

357 ETHICS

Mr. Desjardins

A study of certain major proposals concerning the norms which ought to govern human life. Prerequisite: permission of the instructor.

Not offered in 1970-71

399b SENIOR SEMINAR

Staff

Seminar meetings, aimed at helping senior philosophy majors achieve greater comprehension and comprehensiveness with regard to the history of philosophy and selected problems. Required of, and open only to, senior philosophy majors.

480 INDEPENDENT STUDY

Staff

Individual consultation with independent reading and research. Prerequisite: permission of the instructor.

PHYSICS

Associate Professor DOUGLAS MILLER, *Chairman*

Professor WILLIAM C. DAVIDON*

Assistant Professor WALTER J. TRELA

Assistant Professor JERRY P. GOLLUB

Assistant Professor J. KEMP RANDOLPH†

The Physics curriculum introduces students to concepts and methods which are now fundamental throughout the sciences. It provides opportunities for first-hand experimental investigations together with the study of those basic principles that have led to profound scientific, philosophical, and technological developments in the 20th century.

Non-science majors who wish a one-semester, largely qualitative and historical study of those particular concepts which have had the most general impact on our society are encouraged to take Physics 117b. Those who wish a more quantitative one-year course with laboratory should consider Physics 113a and 114b.

Prospective science majors are advised to study some physics in their freshman or sophomore years because all contemporary sciences rely heavily on basic physical principles. Potential natural scientists who take college mathematics or have some background in physics should take Physics 115a and 116b.

The Physics curriculum features a basic sequence of five introductory and intermediate courses which are required of all majors. Following this basic sequence of courses, a student is offered a maximum of flexibility in pursuing his scientific interests. Students planning graduate work in Physics will need five advanced courses in Physics, numbered 312a and above, which are to be chosen in consultation with the Department. Students with interests in the interdisciplinary fields of astrophysics, biophysics, chemical physics, mathematical physics, philosophy of science, or medical science can base their studies upon a foundation of introductory and intermediate Physics courses.

The senior year in the Physics Department features an opportunity for a supervised research project and a supervised teaching experience.

*On leave first semester, 1970-71.

†Appointed on the Sloan Foundation Grant.

MAJOR REQUIREMENTS

1. Classes of 1971 and 1972 — the former Physics 19, 20, 25, 26 and two additional courses in Physics numbered from 312a to 318b.
Class of 1973 — the former Physics 19, 20; 213a, 311b and two additional courses in Physics numbered from 312a to 318b.
Class of 1974 — Physics 115a, 116b, 213a, 214b, 311a, and one additional course in Physics numbered from 312a to 318b.
2. Mathematics 113a, 114b or 119a; 120b and 221a.
3. Two additional courses selected from Physics courses from 312a to 318b, and Bryn Mawr courses 202b and 301a,
or from Astronomy 301a, 320b, 340b
or from Chemistry 203a, 304b, 306b
or from Biology 201b, 203b, Chemistry 203a
or from Mathematics 202b, 333a, 334b
or from Philosophy 107a, 301, 356b.
4. One semester selected from Physics courses numbered above 400.

REQUIREMENTS FOR HONORS

The granting of Honors in Physics will be based upon the quality of performance in course work and in the supervised teaching experience, or the research tutorial.

113a, 114b PRINCIPLES OF PHYSICS

Mr. Randolph

Four hours, including one laboratory period

Certain fundamental concepts of contemporary physics are presented, with particular emphasis on conservation laws and symmetry principles. These concepts are used in the analysis of both macroscopic and microscopic phenomena. In Physics 113a, the focus is on conservation of energy, linear momentum and angular momentum; in Physics 114b, electric charge, entropy and baryon number are considered. Those mathematical concepts beyond high school algebra which are necessary for the course will be developed as needed. No prerequisites.

115a BASIC PHYSICS

Messrs. Trela and Miller

Four hours, including one laboratory period

Fields due to neutral and charged particles at rest and in motion; conservation laws; scattering; orbital motion.

Prerequisite: Mathematics 113a (concurrently). Prior acquaintance with physics is desirable.

116b BASIC PHYSICS

Messrs. Gollub and Davidon

Four hours, including one laboratory period

Induced fields, photons, special relativity, models of atomic and nuclear structure. Prerequisite: Physics 115a.

117b PHYSICS IN THE TWENTIETH CENTURY

Mr. Davidon

Three hours; no laboratory

Development of the theory of relativity, the quantum theory, and nuclear physics, with dual emphases on the scientific elements of the theories and the broader implications that they have had in our culture. A study of the current goals of science will lead into a discussion of such contemporary problems for the scientific community as space research and the space program, high-energy physics research, government and military support of science. The latter problems will be studied by small groups of students and discussed in seminar, with specialists invited from outside the Department, including Philips visitors.

213a ELECTROMAGNETIC WAVES

Mr. Gollub

Four hours, including one laboratory period

Oscillations, circuit analysis, electronics, plane waves, optics. Prerequisite: Physics 114b or 116b.

214b ELECTRIC AND MAGNETIC FIELDS

Mr. Davidon

Four hours, including one laboratory period

Multipole moments, Maxwell's equations, static field distributions, spherical waves. Laboratory work with the computer.

Prerequisite: Physics 213a.

Offered in 1971-72 and thereafter.

311a,b INTRODUCTORY QUANTUM MECHANICS

Mr. Miller

Four hours, including one laboratory period

Inference of quantum principles from experiment, algebra of symmetries and conservation laws, energy levels, intrinsic spin and quantum statistics, emission of light.

Prerequisites: Physics 116b or 214b, and Mathematics 221a.

311b offered in 1970-71; 311a offered in 1972-73 and thereafter.

312a,b NUCLEAR PHYSICS

Mr. Miller

Four hours, including one laboratory period

Properties of the deuteron, scattering theory, isotopic spin, nuclear models, pion-nucleon interactions.

Prerequisite: Physics 311a or b.

312a offered in 1971-72; 312b offered in 1973-74.

313a,b PARTICLE PHYSICS

Mr. Davidon

Three hours; no laboratory

Classification of particles and unitary symmetry; scattering theory including relativistic kinematics; production and decay of unstable particles. Prerequisite: Physics 312a or b.

313b offered in 1971-72; 313a offered in 1973-74.

314b STATISTICAL PHYSICS

Mr. Gollub

Four hours, including one optional laboratory period

The statistical formulation of the description of a system of many particles

is developed. This technique is used to derive the laws of thermodynamics and statistical mechanics. The macroscopic thermal properties of gases, solids and liquids are then studied. Prerequisite: Physics 311a or b.

Offered in 1971-72 and alternate years.

315a DYNAMICS OF WAVES AND PARTICLES

Mr. Gollub

Four hours, including one laboratory period

Oscillations, circuit analysis, electronics, plane waves, optics. Prerequisite: the former Physics 20.

Offered in 1970-71 but not thereafter.

316b SOLID STATE PHYSICS

Mr. Trela

Four hours, including one laboratory period

Crystal symmetries, binding forces, lattice vibrations, specific heats, free electron theory of metals, energy bands, semi-conductors, magnetism, superconductivity. Prerequisite: Physics 311a or b.

Offered in 1970-71 and alternate years.

317a MATHEMATICAL PHYSICS

Mr. Davidon

Three hours

Applications to physics of linear algebra, Fourier analysis, integration in the complex plane, differential equations, calculus of variations, and group theory. Prerequisite: Mathematics 120b, 221a.

Offered in 1971-72 and thereafter.

318a,b QUANTUM MECHANICS

Mr. Miller

Four hours, including one optional laboratory period

Conservation of charge, leptons and baryons; creation and annihilation of matter and anti-matter; symmetries in space and time; decay processes. Prerequisites: the former Physics 25 or 311a or b.

318a offered in 1970-71; 318b offered in 1972-73.

411a, 412b THEORETICAL PHYSICS

Mr. Davidon

A program of lectures, readings and independent work on current problems and methods in theoretical physics. Applications of group theory to the study of symmetry in physics will be emphasized.

415a, 416b HIGH ENERGY PHYSICS

Mr. Miller

A research tutorial including theoretical and experimental work on strong and electromagnetic interactions.

417a, 418b LOW TEMPERATURE PHYSICS

Messrs. Trela and Gollub

Supervised student research in superconductivity and liquid helium. Experiments are performed at temperatures down to 1°K.

450a,b ASSOCIATION IN TEACHING BASIC PHYSICS

Staff

Student association with staff in Physics 113a, 114b, 115a or 116b; involves leadership in recitation meetings and supervision of laboratory meetings. Open to seniors.

POLITICAL SCIENCE

Professor HARVEY GLICKMAN, *Chairman***

Assistant Professor G. ERIC HANSEN

Assistant Professor ROBERT A. MORTIMER

Assistant Professor SARA M. SHUMER

Assistant Professor SIDNEY R. WALDMAN, *Acting Chairman*

Lecturer ZELBERT MOORE††

Visiting Lecturer TADEUSZ K. KRAUZE†

Visiting Lecturer MURRAY S. LEVIN††

Diplomat-in-Residence with the rank of Professor

NORMAN B. HANNAH

The political science curriculum is designed to give students an understanding of political organization and political forces in modern society, to provide knowledge and a basis for insight and judgment on the problems involved in the relationship of the individual to government, and of governments to one another. The broad areas of study include: analysis of political theory in relation to its institutional environment, comparison and appraisal of different types of governments and political organization, American political behavior and institutions, and problems of international relations.

The courses are designed primarily for a liberal arts education and are intended to create intelligent and lasting interest and participation in the formulation of public policy. The training will also serve the needs of men contemplating scholarship and teaching in political science, as well as other professional careers such as law, journalism, and the public service.

In advanced courses, emphasis is placed upon individual research and analysis — practice in concept formation, location, organization, and presentation of data — and upon independent judgment.

Majors in political science are expected to understand the relationship of this field to other social studies, as well as to the purposes and methods of the social sciences as a whole. They are thus expected to take supporting courses in economics, history, sociology, and psychology.

**On leave, second semester, 1970-71.

†On appointment first semester 1970-71.

††On appointment second semester 1970-71.

MAJOR REQUIREMENTS

To enter the Department: Political Science 151a or 152b, and one other course in the 100 series. Departmental studies: Political Science 391a, 392b, and six other courses in political science, distributed among three of the four areas of study: 1) comparative politics, 2) American politics, 3) international relations, and 4) political theory and political philosophy.

Four approved semester courses in other social sciences.

A general examination synthesizing major studies, including a special field chosen from among the four areas of study indicated.

In the senior year majors will enroll in the Senior Seminar in Political Studies (391a), and in Research and Writing on Political Problems (392b). Association in Teaching (371a or 372b) is open to selected seniors.

HONORS

The award of Departmental Honors is determined on the basis of a thesis, an oral examination, the quality of course work, and performance in the general examination.

151a, 152b POLITICS: POLITICAL ANALYSIS AND PUBLIC POLICY

Staff and Student Associates in Teaching

Case studies in political affairs, focusing on problems of contemporary importance, illustrating principles of political activity and techniques of analysis. Examples of topics considered: The Politics of Selective Service; Governing the University; Politics and Policy in Education; Pressure Politics: Oil; The Urban Crisis; the New York Teachers' Strike; The Cuban Missile Crisis; Revolution in China; Political Development and Decay: Nigeria; Decolonization and Peacekeeping in the Congo.

Open to freshmen and sophomores only.

Political Science 151a and 152b provide the student with a basic understanding of the major elements of the political process; either one is a prerequisite for further work in political science.

154b THE POLITICAL LEADER

Mr. Mortimer

Examination of the interaction between the political leader and his society; impact of leadership styles on the polity, as well as impact of the exercise of power on leadership; personality, ideology and institutions as determinants of leadership. Case studies of selected leaders in Europe and the "Third World" (e.g., De Gaulle, Senghor, Bourguiba), bearing on the leader as political thinker and actor. Prerequisite: Political Science 151a or 152b or consent of the instructor. Enrollment limited.

Open to freshmen and sophomores only.

156b POLITICAL THEORY: THE CITIZEN AND THE STATE Miss Shumer

Selected problems involved in the question of the individual's relationship to the polity: liberty and authority, obligation and civil disobedience, political thought and action. Examination of classical and contemporary theorists, such as Plato, Machiavelli, Rousseau and Marx. Prerequisite: Political Science 151a or 152b or permission of the instructor. Enrollment limited. Open to freshmen and sophomores only.

158b THE AMERICAN PRESIDENCY AND THE BUREAUCRACY

Mr. Waldman

Examination of the institution of the Presidency in the past few decades, focusing on the ways the President relates to Congress, his own staff, the executive bureaucracy, his party, the media and the public. Special attention to the executive bureaucracy and its relations with Congress and interest groups. Prerequisite: Political Science 151a or 152b and permission of the instructor. Enrollment limited.

Open to freshmen and sophomores only.

160b PROBLEMS IN AMERICAN FOREIGN POLICY

Mr. Hansen

Examination of important substantive questions of policy in order to illuminate major trends and premises evolved since World War II. Case studies, such as: Berlin and Germany, Formosa and Communist China, relations with India, foreign aid. Attention to policy-making processes. Prerequisite: Political Science 151a or 152b or permission of the instructor. Enrollment limited.

Open to freshmen and sophomores only.

Offered in 1970-71 and alternate years.

162b SCIENCE AND POLITICS

Mr. Hansen

Survey of the impact of science and technology on American society and politics. Emphasis on the impact of the growth of knowledge on the development of social skills and stratification and on the consequences for the allocation of political resources. Case studies, such as: the military-industrial establishment, the space program, application of science and technology to contemporary social problems. Prerequisite: Political Science 151a or 152b or permission of the instructor. Enrollment limited.

Open to freshmen and sophomores only.

Offered in 1971-72 and alternate years.

203a GOVERNMENT AND POLITICS IN EAST ASIA

Mr. Steslicke

A comparative examination of East Asian political systems with special emphasis on modern Japanese government and politics.

Offered at Bryn Mawr.

205a GOVERNMENT AND POLITICS IN WESTERN EUROPE

Mr. Frye

A comparative analysis of the contemporary political systems of Great Britain, France, and Germany or Scandinavia, with special reference to factors making for stable and effective democracy.

Offered at Bryn Mawr.

208b INTRODUCTION TO LATIN AMERICAN POLITICS

A comparative analysis of political systems of Latin America.

Offered at Bryn Mawr.

209b WESTERN POLITICAL THOUGHT

Mr. Salkever

A study of the fundamental problems of modern Western political thought, based on an analysis of the writings of the leading theorists.

Offered at Bryn Mawr.

- 210a THE SOVIET SYSTEM Mr. Hunter
(See Economics 210a)
Offered in 1970-71 and alternate years.
- 216a AFRICAN CIVILIZATION Messrs. Glickman or Mortimer or McGaffey
(See Social Science 216a—General Courses)
- 218a URBAN POLITICS Mr. Ross
 Rise of cities, urban groups, forms of political organization in urban areas, current problems of cities. Cross-cultural comparisons.
Offered at Bryn Mawr.
- 219b AMERICAN CONSTITUTIONAL LAW Miss Leighton
 An analysis of some of the basic principles and processes of American public law. Attention is centered on decisions and opinions of the Supreme Court as they relate to the formation of public policy and to value patterns of American liberal democracy.
Offered at Bryn Mawr.
- 220a INTERNATIONAL RELATIONS Mr. Hansen
 Examination of major theoretical problems, as well as substantive trends, in international politics. Particular use of systems theory in illuminating case studies drawn from the international arena of the years after World War II, including the Soviet-American confrontation, the emergence of the "Third World," and the revolution in weapons technology. Prerequisite: Political Science 151a or 152b or consent of the instructor. Enrollment limited.
- 221a INTERNATIONAL LAW Miss Leighton
 An examination of the doctrines and practices of international law. Traditional material is considered in the context of the contemporary political process, with some emphasis on methodological problems.
Offered at Bryn Mawr.
- 223a AMERICAN POLITICAL PROCESS: PARTIES, THE CONGRESS, AND THE PRESIDENT Mr. Waldman
 A functional and behavioral analysis of the policy-making process. Political parties, legislative behavior, and powers and the interactions between the President and Congress will be examined. Prerequisite: Political Science 151a or 152b and consent of instructor. Enrollment limited.
- 225b COMPARATIVE POLITICS: POLITICAL DEVELOPMENT Mr. Glickman
 A study of the theory and processes of political modernization in new states. Problems include the impact of the West on traditional societies, the growth and effects of nationalism, institutional transfer, political reconstruction and development policy. Prerequisite: Political Science 151a or 152b or consent of the instructor.
- 226b INTERNATIONAL ORGANIZATION Mr. Hansen
 Examination of underlying patterns of community in international political systems and the possibilities for an emerging social consensus; survey of

international organizations, such as the United Nations and regional groupings. Attention to internationally organized processes such as peaceful settlement of disputes, diplomatic practice, negotiation. Prerequisite: Political Science 220a or consent of the instructor. Enrollment limited.

Offered in 1970-71 and alternate years.

227a AMERICAN POLITICAL THEORY

Miss Shumer

The study of the foundations of American politics through an exploration of the roots and development of American political thought and institutions and an analysis of their theoretical assumptions and implications. Prerequisite: Political Science 151a or 152b or consent of the instructor.

228b PUBLIC OPINION, PRIVATE INTERESTS, AND THE POLITICAL SYSTEM

Mr. Waldman

An in-depth analysis of the formation of political attitudes, the functions of public opinion in shaping public policy, and the impact of interest groups on that policy. Prerequisite: Political Science 151a or 152b and consent of instructor. Enrollment limited.

Offered in 1971-72 and alternate years.

229b PROBLEMS IN CONTEMPORARY AMERICAN POLITICAL THEORY

Miss Shumer

A study of selected issues which pose fundamental problems to the American political system, such as the decline of pluralism, mass society, bureaucracy, technology and violence. Prerequisite: Political Science 151a or 152b or consent of the instructor; 223a and 227a are recommended.

231a RECENT POLITICAL PHILOSOPHY: SOURCES AND VARIETY

Mr. Salkever

Examination of alternative ways of formulating and answering basic questions in 20th century political philosophy. Attention given first to 19th century theorists, e.g., Marx and Mill. Issues considered: value of liberty, justification of democracy, articulation of personal autonomy, political obligation as discussed by modern authors such as Dewey, Niebuhr, Ortega, Oakeshott, Wolff, Camus, Arendt and Strauss. Prerequisite: Political Science 299b or either Philosophy 101 or 201.

Offered at Bryn Mawr.

232b LAW AND EDUCATION

Mr. Wofford

An exploration of the principle of persuasion in the United States Constitution and the common law, with special attention to the educational implications of the First Amendment and to the theory and practice—uses and abuses—of civil disobedience. Reading will include legal cases and commentaries as well as some basic literature in political theory. Enrollment limited.

Offered at Bryn Mawr.

252b RATIONALITY, PURPOSE AND COLLECTIVE WELFARE

Mr. Waldman

An examination of the problems involved in defining "the public good." Focus on recent attempts by political economists to bridge the gap between

individual rationality and welfare on the one hand, and collective rationality on the other. Investigation of alternative models of individual and collective rationality and their implications for definitions of social welfare. Prerequisite: Political Science 151a or 152b and consent of the instructor. Enrollment limited.

Offered in 1970-71 and alternate years.

258b PUBLIC POLICY: CIVIL RIGHTS AND POVERTY Miss Shumer

An historical and analytical inquiry into the scope and nature of the problems in the selected policy area of civil rights and poverty, and the systematic analysis of the capacity of the present political system (including the government and non-governmental groups) to deal effectively with these problems. Prerequisite: Political Science 151a or 152b or consent of the instructor; 223a and 227a are recommended.

Offered in 1971-72 and alternate years.

262b THE AFRO-AMERICAN EXPERIENCE Mr. Moore

(See Social Science 262b—General Courses)

263a IMPERIALISM, NATIONALISM AND DECOLONIZATION

Mr. Mortimer

Examination of forces in international politics leading to the decline of empires and the rise of new states in the "Third World" in recent years. Emphasis on the connections between domestic and external politics; comparison of foreign policies; role of ideologies. Prerequisite: Political Science 151a or 152b or consent of the instructor. Enrollment limited.

Offered in 1971-72 and alternate years.

266b POLITICS AND INTERNATIONAL RELATIONS IN THE MIDDLE EAST AND NORTH AFRICA Mr. Mortimer

Examination of the main currents of internal political change and interstate relations. Emphasis on the interaction of ideologies, leadership and social transformations. Prerequisite: Political Science 151a or 152b or consent of the instructor. Enrollment limited.

268b AFRICAN POLITICS Mr. Glickman

Organization, distribution, aims and uses of power in selected areas of tropical and southern Africa today. Prerequisite: Political Science 151a or 152b or consent of the instructor. Enrollment limited.

Offered in 1972-73 and alternate years.

272b THE EIGHTEENTH CENTURY PHILOSOPHES

(Also called French Civilization 242b.)

Not offered in 1970-71.

301a LAW AND SOCIETY Miss Leighton

An introduction to the nature of legal obligation and its relation to selected social institutions. Typical legal problems pertaining to the family, poverty, and government are discussed.

Offered at Bryn Mawr.

- 304b WEST EUROPEAN INTEGRATION Mr. Frye
An analysis of postwar moves toward integration in Western Europe, with special emphasis upon the factors behind integration and upon the impact of integration upon member societies.
Offered at Bryn Mawr, not in 1970-71.
- 316b URBAN AFFAIRS Mr. Ross
Seminar on selected topics in urban politics today. Field work.
Offered at Bryn Mawr.
- 320a POLITICAL MODERNIZATION IN BRITAIN AND JAPAN Mr. Steslicke
A critical examination of the concept "political modernization" and a survey of the relevant scholarly literature with particular reference to the experience of Britain and Japan during the past century.
Offered at Bryn Mawr.
- 351a COMPARATIVE POLITICAL SOCIOLOGY Mr. Glickman
Explorations in general political and social theory: problems of authority, conflict, participation, integration and development. Emphasis on writings of major social theorists and experiences of selected political systems in the 19th and 20th centuries. Prerequisite: Political Science 151a or 152b or consent of the instructor. Enrollment limited.
Offered in 1970-71 and alternate years.
- 352b INTERNATIONAL POLITICS OF COMMUNISM Mr. Hansen
Examination of some of the major dimensions of international politics as practiced between Communist powers, and between Communist and non-Communist states. The influence of differing ideological perspectives such as Titoism, Maoism and Castroism will be explored, as well as common perspectives derived from various historical forms of Marxism. Illustrative case studies from the relations of the Soviet Union with the Arab states, Yugoslavia and China. Prerequisite: Political Science 151a or 152b or consent of the instructor. Enrollment limited.
Offered in 1970-71 and alternate years.
- 354b LAW AND POLITICS Mr. Levin
An investigation of the relationship between law and politics in order to discover how political power is exercised in the legal system. Consideration of legal and political theory, the legal process and historic and contemporary case studies. Distinguished visitors. Prerequisite: Political Science 151a or 152b or consent of the instructor. Limited enrollment, with preference to Political Science majors.
- 355a MATHEMATICS OF POLITICAL AND SOCIAL CONFLICT Mr. Krauze
Introduction to mathematical models of political phenomena. Consideration of voting behavior, coalition-formation, collective decision-making and the strategy of conflict. No prerequisites; acquaintance with mathematical reasoning desirable. Limited enrollment.
Not open to freshmen.

357a RESEARCH SEMINAR IN POLITICAL ANTHROPOLOGY

(See Sociology 357a)

371a, 372b POLITICAL ANALYSIS: ASSOCIATION IN TEACHING Staff

Student association with staff in Political Science 151a, 152b or, sometimes, in other 100-level Political Science courses. Open to selected senior majors only.

391a SENIOR SEMINAR IN POLITICAL STUDIES

Staff and Special Examiner

Main themes in contemporary political thought and analysis. Discussions, papers, culminating in senior general examination.

392b RESEARCH AND WRITING ON POLITICAL PROBLEMS Staff

Tutorials, research projects, culminating in a senior thesis.

Open to Political Science seniors only.

481f, 482i INDEPENDENT STUDY

Staff

Individual consultation; supervised independent reading and research

Research papers and oral reports on special topics based upon the individual interests of advanced students. Enrollment only by permission of the instructor.

483a, 484b TOPICS IN POLITICAL THEORY AND ANALYSIS Staff

Student-organized and student-conducted courses, with faculty supervision. Topics chosen in the past: Student Rebellions; Conflict Theory, Strategy, and Political Gaming. Minimum group of eight students and consent of the Chairman of the Political Science Department required. Prerequisite: two courses in Political Science. Registration one time only.

PSYCHOLOGY

Professor SIDNEY I. PERLOE, *Chairman*
Professor DOUGLAS H. HEATH**
Associate Professor THOMAS D'ANDREA
Assistant Professor PRESTON B. ROWE, JR.

The Psychology curriculum consists of three levels of courses and a special Senior Program. The first or general level includes courses which aim at providing students with the experience of how psychologists use their knowledge and skills to understand issues of contemporary concern. Although the courses will not attempt to survey the field, it is hoped that the examination of a few problems in some depth and the carrying out of research projects will also allow the student to encounter methods and concepts in related areas of the discipline. The second, intermediate level courses are oriented primarily toward the systematic treatment of basic concepts, methods and data in four broad areas of psychology. Advanced courses focus in greater detail and with greater sophistication on topics drawn from the areas covered at the second level. Several of the second and third level courses carry practicums which involve the student in experiments and field observation. The senior program is described below. Students are encouraged to examine the program of the Bryn Mawr Psychology Department for additional courses.

MAJOR REQUIREMENTS

The major program will include the following intermediate courses: 223a, Personality Theory; 130b, Animal Learning and Ethology; 136b, Social Psychology; and 235a, Perception and Cognition. Psychology 351a, Research Topics in Psychology, may be substituted for one of the intermediate courses carrying an associated practicum. Psychology 153d, e, g, the Social Science Statistics half-course, will normally be taken along with one of the intermediate level courses. Majors will also be expected to take two advanced courses (other than 480) as well as the Senior Program. The advanced courses may be taken at Haverford or Bryn Mawr. Students expecting to go on to graduate school in Psychology should take Psychology 351a.

REQUIREMENTS FOR HONORS

The award of Departmental Honors signifies that a student has maintained a consistently high standard of performance in the work of his major program, and has done distinguished work on an independent empirical research project as well as in the Senior Program. Honors candidates should plan to take Psychology 351a during the senior year; they may also be given an oral examination.

**On leave, second semester, 1970-71.

GENERAL COURSES

These courses are intended primarily for freshmen and sophomores. Normally, students will take only one general course, but additional courses may be taken for credit with the permission of the instructor.

012b AGGRESSION

Mr. Perloe

A consideration of the physiological, behavioral and social determinants of aggression as it occurs in lower animals, normal and pathological humans, and in relations among groups. Basic psychological concepts from a variety of areas will be introduced throughout the course to provide a general view of how psychologists approach the study of behavior and experience. Regular class meeting will be supplemented by small discussion and project groups. No prerequisites. Enrollment limited to 25.

015a CONTEMPORARY PSYCHOLOGICAL TOPICS: ALIENATION AND THE EDUCATIONAL PROCESS

Mr. Heath

The course has two purposes: (1) to provide students with the experience of how psychologists use their knowledge and skills to understand issues of contemporary concern. We will begin by canvassing the meanings of alienation, identifying and examining in some depth the psychological assumptions involved, and designing and conducting research about selected aspects of alienation. Subsequent topics of study will be determined by the class and might include racial differences in intelligence, the effects of the mass media, technology and leisure on personality development. (2) To explore different types of educational procedures that may reduce alienation and facilitate educational involvement. Members of the seminar will share in the teaching and evaluation processes of the course. Enrollment limited to 20 freshmen.

018a,b GAMES, DECISIONS AND ACTIONS

Mr. Rowe

An analysis of how a psychologist studies processes of thinking and acting. Students will begin by examining both subjective and objective features of their own problem-solving behavior. Various theoretical positions concerning thinking will then be considered. In the second part of the course, the student will again provide himself with data concerning his participation and decisions while playing games and solving problems within a group. Some attention will be paid to such variables as trust, threat and competition. The student will be guided to achieve some synthesis of his course work by considering the variety of factors entering his decisions for action and the relationship between knowledge and action based upon it. No prerequisite. Enrollment limited to 25.

INTERMEDIATE COURSES

121a THE INDIVIDUAL IN SOCIETY

Mr. Perloe

A consideration of the forces operating on individuals by virtue of their participation in groups and larger social structures. Topics to be covered are: the determinants of group cohesiveness, social influence and conformity, crowds, role theory and role conflict, the impact of social systems and culture on personality and the relation between psychology and ethics. No prerequisite.

Offered in 1971-72 and alternate years.

- 130b ANIMAL LEARNING AND ETHOLOGY Mr. D'Andrea
Three hours of lecture and three hours of laboratory
 A study of the controlled laboratory investigation of learning and conditioning of animals and the ethological approach to animal behavior. Theories of learning will be critically examined in view of experimental and naturalistic observations of animal behavior. Students will do experimental work in the animal laboratory and write an ethogram based on some naturalistic observation of a species. Prerequisite: Psychology 153d,e,g, the Social Science Statistics which may be taken concurrently, or permission of the instructor.
- 136b SOCIAL PSYCHOLOGY Mr. Perloe
Three hours of lecture and three hours of research
 A study of the perceptual, motivational and learning processes involved in social behavior. Topics to be considered are: the judgment of social stimuli, forming impressions of other people, evaluating one's abilities, opinions and emotions, social exchange, achievement and failure motivation and imitation. A research practicum will accompany the course. Prerequisite: Psychology 153d, e, g, the Social Science Statistics, or permission of the instructor.
- 153d,e,g SOCIAL SCIENCE STATISTICS Staff
(See General Courses 153d,e,g)
- 201a COMPARATIVE PSYCHOLOGY Mr. Gonzalez
Three hours of lecture and three hours of laboratory
 The evolution of behavior: sensory and motor capacities, instinctive activities, motivation, learning, group processes, social behavior. Prerequisite: Psychology 130b.
Offered at Bryn Mawr.
- 201b ANIMAL LEARNING Mr. Gonzalez
Three hours of lecture and three hours of laboratory
 Comparative studies of conditioning and selective learning; theories of learning; the evolution of intelligence. Prerequisite: Psychology 130b.
Offered at Bryn Mawr.
- 202a MOTIVATION Messrs. Hoffman and Gonzalez
Three hours of lecture and three hours of laboratory
 The activation and regulation of goal-directed behavior: affectional processes, psychological drives, incentives, frustration, conflict, punishment, and anxiety. Prerequisite: Psychology 130b.
Offered at Bryn Mawr in 1971-72 and thereafter.
- 223a THEORIES OF PERSONALITY Mr. Heath
 Although the course will cover the major personality theorists, it will go most intensively into Freudian, Rogerian, and existentialist views of personality. Reading in original sources will be extensive. Emphasis will be placed on mastering the theoretical concepts and relationships. Research issues and methods associated with each theoretical approach will be highlighted. The course material will be supplemented by case study material and

the opportunity to do a minor research project in lieu of a major paper. Prerequisite: One course in psychology or the permission of the instructor. Enrollment limited to 30.

235a PERCEPTION AND COGNITION

Mr. Rowe

Evidence and hypotheses in psychology concerning the way we represent our environments. Topics will include the act of perceiving, visual and auditory memories, categorization and hypothesis testing in representation processes, and computer simulation of perception and cognition. In the second part of the course students will work together on a research project practicum in the areas of perception, conceptualization, or problem solving. Option: Those students who do not choose to take the research practicum part of this course may elect instead to participate in Psychology 341e. Prerequisite: Psychology 153d, e, g, which may be taken concurrently, or permission of the instructor. Not open to freshmen.

Offered in 1970-71 and alternate years.

238b PSYCHOLOGY OF LANGUAGE

Mr. D'Andrea

The course will concentrate on the development of modern psycholinguistics. Such topics as semantics, the interpretation of language in terms of association theories, the relation between language and thinking, and the implications of recent work in generative grammars for a psychology of language will be discussed. Students will have the opportunity to pursue their particular interests, whether they be in the philosophical or mathematical theories of language, in culture and language, or in more conventional linguistics. Prerequisite: One general course in Psychology or permission of the instructor.

ADVANCED COURSES

301a PHYSIOLOGICAL PSYCHOLOGY

Mr. Thomas

Three hours of lecture and one laboratory period

An examination of the physiological basis of a wide range of psychological phenomena, including the role of the nervous system in learning, emotion, motivation, perception and thought. Prerequisite: Psychology 130b. Students wishing to take part in the laboratory must secure permission of the instructor.

Offered at Bryn Mawr.

307a SOCIAL PSYCHOLOGY OF ATTITUDES

Mr. Perloe

Three hours of seminar and three hours of research

A detailed coverage of recent psychological research on the determinants of attitude formation and change. After examining the personal and social sources of attitudes, the course will turn to a consideration of the effects of the following variables upon attitude change: the nature of the communicator, the use of emotional appeals, the structure of persuasive communications, the personalities of communication recipients, and the occurrence of inconsistencies between communication and action. The consequences of gross situational changes such as "brain washing" will also be discussed. A research practicum will accompany the course. Prerequisite: One intermediate course in Psychology or permission of the instructor; Psychology 153d, e, g strongly recommended.

340b MATHEMATICAL THINKING PSYCHOLOGY

Mr. Rowe

The first part of the course will cover mathematical models of psychological processes, theory construction, and various mathematical tools such as information theory, utility theory, logic and set theory, and theory of relations and graphs. The second part of the course will consider the human as a decision-making system. Topics will include models of control systems within the individual, brain decisions, the will and the mind, and control by symbol systems.

Offered in 1970-71 and alternate years.

341e BRAIN, BEHAVIOR, AND EXPERIENCE ($\frac{1}{2}$ credit)

Mr. Rowe

An introduction to some of the recent neurophysiological evidence and theorizing about brain function and states as they relate to psychological constructs such as percepts, images, emotions, intention, choice, and attention. Prerequisite: Permission of the instructor or one intermediate course, which may be taken concurrently.

Offered in 1970-71 and alternate years.

344b DEVELOPMENT THROUGH THE LIFE SPAN

Mr. Heath

Developmental problems of infancy, childhood, adolescence, and adulthood will be viewed from different perspectives, including psychosexual, Erikson's psychosocial and Piaget's cognitive theories. Emphasis will be placed on the healthy mastery of problems like sexuality, identity, responsibility, marriage, religion, and death. There will be a weekly practicum experience with children in a local nursery or elementary school. Student reports, discussion, and occasional lectures will be supplemented by demonstrations, some role-playing, and other experiential forms of learning. Prerequisite: Psychology 223a and permission of the instructor.

345a ANALYSIS OF BEHAVIOR

Mr. D'Andrea

Three hours of lecture and three hours of laboratory

The course systematically formulates and analyzes the problems of scientific method, learning, motivation, and emotion, in terms of the principles of operant conditioning. Detailed analysis will be made of such problems as primary and conditioned reinforcement, reinforcement schedules, and avoidance conditioning. Lectures will emphasize the systematic principles and their application to a variety of human behaviors. The laboratory will involve the study of an individual animal's behavior (e.g., acquisition, extinction, discrimination). Students will also do independent research projects. Prerequisite: Psychology 130b or permission of the instructor.

Offered in 1970-71 and alternate years.

346b ABNORMAL PSYCHOLOGY

Mr. Heath

Three hours of seminar and three hours of fieldwork

The course has two purposes: 1) to introduce a student to the principal forms of psychopathology and deviancy, etiological controversies, methods of personality assessment and therapy, and the meaning of abnormality and its relation to socio-cultural values; 2) to sensitize a student to the subtleties of

interpersonal dynamics as they are related to understanding psychopathology. Intensive case analyses, work with a hospitalized patient, and guided experiential encounters with others will supplement the formal course work. Field-work will be at a neighboring mental hospital. Prerequisite: Psychology 223a and permission of the instructor.

351a RESEARCH TOPICS IN PSYCHOLOGY

Staff

This course will involve students, at an advanced level, in the problems of hypothesis formation and definition, experimental design, data analysis, and report writing by means of closely supervised experimental research projects. Students must have selected the problem on which they wish to work during the spring of the previous year. They may enroll in Psychology 480 for half-credit as a means of preparing for their research project. Prerequisite: Permission of the instructor under whom one intends to work.

480 INDEPENDENT STUDY

Staff

Students should normally plan to take this course for half-credit.

399 THE SENIOR PROGRAM

The senior program is designed to build upon the systematic basis established at the intermediate level and to help the student gain an overview of the theoretical and applied aspects of psychology. It also aims at increasing the understanding of the processes through which psychological knowledge is accumulated and the methods by which it can be communicated to non-psychologists. The program has three aspects. The first is a series of case studies of problems drawn from all areas of the discipline, with particular emphasis placed on the ways in which problems and concepts have developed. The second is a series of visitors, each of whom will meet intensively with the seniors. Most of the visitors will be chosen because of their involvement with the problems treated in the case studies. The selection of cases and visitors will be based in part upon the suggestions made by majors toward the end of the junior year. The third aspect of the program provides an opportunity for students to participate in communicating psychology and supervising student research in general and intermediate courses. Grades of 70 or above in each semester of the program will satisfy the senior comprehensive requirement.

RELIGION

Associate Professor RICHARD G. LUMAN, *Chairman*

Professor GERHARD E. SPIEGLER

Assistant Professor J. BRUCE LONG

Assistant Professor CRAIG L. STARK

Lecturer SAMUEL T. LACHS

At Bryn Mawr College

Professor HOWARD C. KEE

The Department of Religion is concerned with the historical study of religious tradition in the Judeo-Christian-Islamic West; with the historical-phenomenological study of archaic, ancient and classical, and non-Western religious traditions; and with the philosophical study of religious thought, East and West, particularly in its modern forms of expression.

MAJOR REQUIREMENTS

The exact structure of the student's program must be determined in consultation with the major adviser (who is chosen by the student from among the regular members of the Department) together with the advice of the entire Department. The program must include the following courses:

- a. Religion 101a or b, 102a or b, and 399b.
- b. Six additional half-year courses. Two of these courses may be upper-level courses in other departments, including languages. Also among the six courses must be one of the following sequences: Religion 103a, 104a; 117a, 118b; 201a, 202b; 225a, 226b, or any year sequence on the scriptures and sources of a major religious tradition.

Each student's program and record will be reviewed annually by the Department.

Final evaluation of the major program will consist of written and oral examinations to be administered during the senior year in the context of the work for Religion 399b. Specific terms of the synthesis will be reviewed with the majors and members of the Department.

Where necessary for the major program, the Department urges the study of the appropriate foreign language(s).

REQUIREMENTS FOR HONORS

Honors in Religion are awarded on the basis of the oral part of the senior evaluation of students whose written work as juniors and seniors has been of a consistently high standard. High Honors are awarded on the same basis, special consideration being given to work done in project courses.

101a,b RELIGION IN TRADITIONAL CULTURE Messrs. Long and Luman

A study of man's conceptions of himself and society through detailed examination of selected myths and rites, found in the traditions of tribal Africa, Vedic India, or the Ancient Near East. An introduction to and

testing of divergent methodologies and theories of religion in the study of major religious forms and types developed in the Hebrew-Christian tradition. Limit: 20 students in each section.

One-semester course offered in each semester.

102a,b RELIGION IN MODERN CULTURE Messrs. Spiegler and Stark

Modern forms of religious expression and critiques of religion will be studied in the work of such men as Kierkegaard, Marx, Freud, T. S. Eliot, Buber, Bultmann, Tillich, and Camus. No prerequisite. Limit: 20 students in each section.

One-semester course offered in each semester.

103a, 104a BIBLICAL HISTORY AND LITERATURE Mr. Kee

Offered at Bryn Mawr as History of Religion 103

117a, 118b HISTORY OF JEWISH THOUGHT Mr. Lachs

A systematic survey of the development of Jewish thought from the period of the Bible to the present. Fall semester: From the Biblical period to the end of the 15th century. Spring semester: From the 16th century to the present.

119a GREEK CIVILIZATION Mr. Luman

(Also called History 119a and Classics 119a; for course description see History 119a.)

120b ROMAN CIVILIZATION Mr. Luman

(Also called History 120b and Classics 120b; for course description see History 120b.)

201a, 202b HISTORY OF WESTERN RELIGIOUS THOUGHT AND INSTITUTIONS Mr. Luman

History of Christian thought and institutions from the first century to the fifteenth. Religion 101a, b and 102a, b and/or History 111 desirable. Enrollment limited to 20 students.

Offered in 1970-71 and alternate years.

225a, 226b RELIGIOUS TRADITIONS IN INDIA: ANCIENT AND MODERN Mr. Long

(Also called Philosophy 225a, 226b)

A study of the various religious traditions in India (Hindu, Buddhist, Islamic, and tribal) from the earliest developments in the Vedas, Brahmanas, and Upanishads, through the two Indian epics, the Puranas, and the Agamas. Special emphasis will be placed upon tracing the persistence of certain forms of religious belief and worship throughout the course of Indian history. Prerequisite: Religion 101a or b or consent of the instructor.

229a RELIGION AND THE CONTEMPORARY IMAGINATION Mr. Long

(Also called Philosophy 229a)

An introductory study of the basic ideas and issues in contemporary theology and literature, designed to help the student bring into sharper focus the religious dimensions or implications of modern literature—fiction, drama, and poetry. Lectures and discussions will be devoted to close literary analysis

and theological interpretation of selected works of Kafka, Sartre, Camus, Beckett, Auden, Eliot, Kierkegaard, Tillich, and others. Prerequisite: Religion 102a or b or consent of the instructor.

Offered in 1971-72 and alternate years.

236b THE PROTESTANT REFORMATION

Mr. Luman

(Also called History 236b)

A study of the rise and development of the Protestant Reformation during the sixteenth century, its history and thought, with special attention to the work and thought of Luther and Calvin. Prerequisites: Consent of the instructor, and either Religion 101a or b and 102a or b or History 111.

240b HISTORY AND PRINCIPLES OF QUAKERISM

Mr. Bronner

(See History 240b)

326a MYSTICISM: EAST AND WEST

Mr. Long

An investigation into the more central traits of religious and secular mysticism in the history of religions. Readings will be drawn from the following traditions: Hindu (Upanishads, Patanjali, Sankara and Aurobindo), Islamic (various Sufi poets), Judaic (Kabbalah), and Christian (Meister Eckhart, St. John of the Cross, and George Fox). Prerequisite: Consent of the instructor. Enrollment limited.

Offered in 1970-71 and alternate years.

337a RELIGIOUS ETHICS

Mr. Stark

(Also called Philosophy 337a)

An examination of conflicting approaches to such topics as freedom and order, love and justice, vocation and avocation, church and state, just-war theory and nonviolent resistance, population control, and personal responsibility in the uses of power. Reports, lectures, and discussions. Prerequisite: Religion 102a or b or consent of the instructor. Enrollment limited.

338a PHILOSOPHY OF RELIGION

Mr. Stark

(Also called Philosophy 338a)

A study of classical and contemporary treatments of such topics as faith and knowledge, theology and history, science and religion, the nature and existence of God, evil and life after death, and problems concerning truth-claims and meaningfulness in religious discourse. Lectures, reports, and class discussions. Prerequisite: Religion 102a or b or one course in Philosophy.

343a SEMINAR IN RELIGIOUS THOUGHT

Messrs. Spiegler and Stark

(Also called Philosophy 343a)

Specialized study of the works of some major philosopher or theologian, or work on a major theological problem. May be repeated for credit with change of content. Fall semester 1970-71: Hegel (Messrs. Spiegler and Bernstein). Prerequisite: reading knowledge of German or French and consent of the instructor.

350b SEMINAR IN HISTORY OF RELIGIONS Mr. Long
 Intensive study of some period or set of problems in the field. Topic for 1970-71: Mythologies of Death and the Afterlife. Prerequisite: Consent of the instructor.

345a SEMINAR IN WESTERN RELIGIOUS HISTORY Mr. Luman
(Also called History 345a)
 Intensive study of a major thinker or movement in the history of Christianity. May be repeated for credit with change of content. Prerequisite: consent of the instructor.
Not offered in 1970-71.

355a ANTHROPOLOGY OF RELIGION Mr. MacGaffey
(See Sociology 355a)

399b MODERN TRENDS IN RELIGION Staff
 Advanced study of topics in the field. Required of senior majors and open to other qualified seniors with consent of the instructor.

480a,b INDEPENDENT STUDY Staff
 Individual consultation; independent reading and research.

OFFERED UNDER HISTORY OF RELIGION AT BRYN MAWR

001 ELEMENTARY HEBREW Mr. Lachs

103 BIBLICAL HISTORY AND LITERATURE Mr. Kee

207a THE HISTORICAL JESUS AND THE GOSPEL TRADITION Mr. Kee

208b PAUL AND THE RISE OF GENTILE CHRISTIANITY Mr. Kee

303a READINGS IN THE GREEK NEW TESTAMENT Mr. Kee

303b MYTH AND HISTORY: A STUDY OF THE GOSPEL OF JOHN, ITS SOURCES, ITS USE OF JEWISH, HELLENISTIC, AND GNOSTIC CONCEPTS Mr. Kee

ROMANCE LANGUAGES

Professor MARCEL M. GUTWIRTH, *Chairman*

Professor MANUEL J. ASENSIO

Associate Professor BRADFORD COOK

Assistant Professor PATRICK MCCARTHY

Admission of new students to all French and Spanish courses except French 001 and Spanish 001 is contingent upon placement examinations administered by the Department prior to the opening of such courses.

Students who complete French 001, Spanish 001 or Spanish 003 with distinction are given opportunity to advance rapidly into higher courses by passing a special examination in September on a prescribed program of vacation study.

Residence in the French and Spanish Houses and participation in the Cercle Français and Club Español afford an opportunity for supplementary oral practice.

Students who might profitably spend their junior year in France or Spain are encouraged by the Department to apply for admission to the institutions sponsoring foreign study groups.

Students majoring in a Romance language are encouraged to spend a summer in France or in a Spanish-speaking country. Foreign summer schools and projects sponsored by the American Friends Service Committee and other organizations offer exceptional opportunities in this regard.

FRENCH

The program in French is designed to give the student some facility in handling the French language, by elucidation and review of fundamentals, by a progressive course of reading, and constant practice in hearing, speaking, and writing French. Close scrutiny of style and structure, of moral and artistic intentions, orients the study of the masterpieces of French literature, which the student is then ready to approach, toward a heightening of his perception of artistic achievement, an enlargement of his understanding of both heart and mind. Reading in the original of the works of major figures such as Pascal, Molière, Balzac, Flaubert, Proust, moreover, will perfect his acquaintance with some of the best in his own heritage, the culture of the West.

MAJOR REQUIREMENTS

French 202a, 202b, 203a, 203b, 301a, 301b, and 490b.

Supporting courses to be arranged in individual conference with the major supervisor.

Comprehensive examination.

REQUIREMENTS FOR HONORS

Honors in French will be awarded on the basis of consistently distinguished work in the literature courses—including at least one project course—and of a grade of 90 or better on the comprehensive examinations. High Honors will be determined by a further oral examination.

001 INTRODUCTION TO FRENCH LANGUAGE AND THOUGHT

Staff

Pronunciation and intonation; grammar, with oral and written exercises. Reading, in the second semester, of easy texts of literary merit.

This course is not open to freshmen who have had more than two years of high-school French.

101 INTERMEDIATE FRENCH

Staff

Training in the language is pursued on the basis of a sampling of works designed to acquaint the student with the range of French thought and letters, from François Villon to the present. Grammar review, *dictées*, short written compositions, classes conducted in French. Prerequisite: French 001 or satisfactory performance on a placement test.

201a DICTION AND COMPOSITION IN FRENCH

Mr. McCarthy

Intensive language work in a small class. Grammar review, compositions, pronunciation drill, oral reports. The work will be centered on literary topics (e.g., the contemporary theatre), but the emphasis will be on perfecting linguistic performance. Prerequisite: permission of the Department.

201b *EXPLICATION DE TEXTES*

Mr. McCarthy

An introduction to the study of French literature by the method of intensive analysis of style and structure applied to the several *genres*. Prose and poetry, essay and fiction drawn from a variety of periods will come under scrutiny. Prerequisite: French 201a or the equivalent.

202a THE CLASSICAL AGE

Reading in the French 17th century, from Pascal's *Pensées* to La Bruyère's *Caractères*, with special attention to the flowering of the classical drama. Prerequisite: French 201b or the equivalent.

Offered in 1971-72 and alternate years.

202b THE TWENTIETH CENTURY

Three generations, those of Gide, Malraux, and Sartre, will be examined in representative novels, plays, essays, and poems. Prerequisite: French 201b or the equivalent.

Offered in 1971-72 and alternate years.

- 203a NINETEENTH CENTURY LYRIC POETRY Mr. Cook
The lyrical rebirth of the 19th century: Vigny, Baudelaire, Rimbaud, Mallarmé. Prerequisite: French 201b or the equivalent.
Offered in 1971-72 and alternate years.
- 203b THE NOVEL FROM LACLOS TO PROUST Mr. Gutwirth
The rise of the modern novel in France from the late 18th to the early 20th century with particular attention to Balzac, Stendhal, Flaubert, Zola, and Proust. Prerequisite: French 201b or the equivalent.
Offered in 1970-71 and alternate years.
- 301a ADVANCED TOPICS IN FRENCH LITERATURE Mr. Gutwirth
1970-71: Rabelais. A close reading of the first four books of the Gargantua and Pantagruel adventures in light of recent views concerning the humanist movement, verbal exuberance, and the comic spirit. Prerequisite: consent of the instructor.
- 301b ADVANCED TOPICS IN FRENCH LITERATURE Mr. Cook
1970-71: Flaubert, Mallarmé. Prerequisite: consent of the instructor.
- 480a,b INDEPENDENT STUDY Staff
This course offers the student of French literature an opportunity to probe more deeply and more independently into a problem or into an area in which he is particularly interested. The nature of the course will therefore vary to suit the needs of the individual student.
- 490b SENIOR DEPARTMENTAL STUDIES Staff
Masterworks from the Renaissance to the present. A representative sample of major works by twelve writers of the first rank is assigned in this course, together with a recent scholarly appraisal of each writer, to allow the student to form a view of the high points of the literary tradition against a background of authoritative, up-to-date assessment. From Montaigne to Proust the readings cover a span of four centuries, and they range from Voltaire's polemic wit to Baudelaire's aesthetic detachment. The object of the course is to cap the student's acquaintance with French literature by a reconsideration of some of its main achievements. Among the writers presented are: Pascal, Molière, Racine, Flaubert, Gide. Prerequisite: senior standing or permission of the Department.

FRENCH CIVILIZATION

- 241a THE IMPRESSIONIST ERA Mr. McCarthy
(Also called History 241a)
A study of late 19th century French civilization: painting, literature and history. Examination of the Impressionist and post-Impressionist painters (with slides and guest lectures). Readings from Flaubert, Zola, Maupassant and the poets. Study of selected topics from the history of the Third Republic. Particular attention will be paid to the links among the various cultural and social phenomena. A knowledge of French is not required.

242b THE EIGHTEENTH CENTURY *PHILOSOPHES*

(Also called *Political Science 272b*)

Montesquieu, Voltaire, Rousseau, Diderot. Readings in English from the works of these four major figures of the European Enlightenment, whose contribution to sociology, political theory, and theory of education singularly broadened the idea of the writer's function in society. Some attention will also be given to Helvetius, Condillac, and the *Encyclopédie*.

Not offered in 1970-71.

243b CONTEMPORARY FRANCE

Mr. McCarthy

(Also called *History 243b*)

An examination of the main political, social and cultural trends of contemporary France. Selected topics in French history from 1940 to the May riots and the resignation of De Gaulle. Discussion of current events. Study of the structure of French family life, of the educational system, etc. Readings from such authors as Céline, Camus, Sartre, Robbe-Grillet and Cayrol. A knowledge of French is desirable but not required.

COURSES OFFERED AT BRYN MAWR

305a BALZAC

Mr. Serodes

305b AUTOBIOGRAPHY: CHATEAUBRIAND TO SARTRE

Mr. Maurin

SPANISH

The courses offered in Spanish are designed to give the students a thorough knowledge of the Spanish language and an understanding of Spanish and Spanish-American thought and culture. Elementary Spanish and Intermediate Spanish are primarily language courses, with emphasis on grammar, reading, and conversation. Even in these elementary courses the approach corresponds to the liberal tradition of the College, placing emphasis on the human value of the language, and its importance in international and continental solidarity and understanding. The elementary courses are followed by general courses in civilization and literature, as the basis for the more advanced courses covering special periods, works, and authors in Spanish and Spanish-American literatures. Interested students should consider, in addition to the courses listed below, the offerings in Spanish at Bryn Mawr College.

MAJOR REQUIREMENTS

Spanish 101, 201, 303a, 401a or 401b, 490.

History of Spain and Spanish America, as a background for literature.

Supporting courses to be arranged in individual conference with the major supervisor.

Comprehensive examination.

Spanish majors are advised to take Spanish 202 (Spanish Readings and Composition) at Bryn Mawr College.

REQUIREMENTS FOR HONORS

Honors in Spanish are awarded to students who consistently show high-quality work in their literature courses and undertake study beyond the normal requirements. Every Honors student must complete at least one project course. A minimum grade of 88 is required in the comprehensive examinations. High Honors are awarded on the basis of a further oral examination.

- 001 ELEMENTARY SPANISH Mr. Asensio
Grammar, with written and oral exercises; reading; thorough drill in conversation.
- 003 INTERMEDIATE SPANISH Mr. Asensio
Review of grammar, with written and oral exercises; composition, reading, and conversation. Prerequisite: Spanish 001 or the equivalent.
- 101 INTRODUCTION TO SPANISH LITERATURE Mr. Asensio
A survey of Spanish literature from the beginnings to modern times; lectures, written and oral reports. Prerequisite: Spanish 003 or the equivalent.
- 201 INTRODUCTION TO LATIN-AMERICAN LITERATURE Mr. Asensio
A survey of Latin-American literature from the Colonial period to modern times; lectures, written and oral reports. Prerequisite: Spanish 003 or the equivalent.
Not offered in 1970-71.
- 203 INTRODUCTION TO HISPANIC CIVILIZATION Mr. Asensio
Geographic, cultural, and historical background. Emphasis is laid on basic attitudes underlying the Spanish and Spanish-American culture pattern and contrasting with characteristic American attitudes. Lectures, reading, discussion, written reports. Prerequisite: Spanish 003 or the equivalent.
Not offered in 1970-71.
- 303a THE AGE OF CERVANTES Mr. Asensio
The development of Cervantes' art in the drama, the short story, and the novel with special attention to *Don Quixote*.
- 301a, 301b SPECIAL TOPICS IN SPANISH LITERATURE Mr. Asensio
Reading and lectures, written and oral reports. This course may be repeated, with change of content, for full credit.
- 401a INDEPENDENT STUDY Mr. Asensio
- 490 SENIOR DEPARTMENTAL STUDIES Mr. Asensio

RUSSIAN

Professor FRANCES DE GRAAFF, *Chairman**

Instructor FREDERICK SCHULZE

At Bryn Mawr College

Associate Professor RUTH C. PEARCE

The courses in Russian are designed to offer the students the opportunity to learn to read and speak Russian and to achieve an understanding of the thought and culture of pre-revolutionary as well as contemporary Russia. Russian 001 and 101 are primarily language courses. The elementary course teaches the basic grammar and enough vocabulary to enable the student to speak and understand simple Russian. The intermediate course introduces the student to the Russian literary language; also some newspaper articles and other contemporary material are read.

Students who have completed Russian 101 can continue with the more advanced courses offered at Bryn Mawr College.

MAJOR REQUIREMENTS

(Courses numbered above 200 are offered at Bryn Mawr College). Students majoring in this field will be required to take: Eight semester courses in Russian language and literature: 001, 101, 200 or 201, a 300-level course, either 302 or 303 in addition to the Comprehensive Conference.

Three semester courses in Russian history and institutions: History 244 (Russian History); Political Science 210a (The Soviet System). Other related courses, including Russian 200 (Advanced Training in the Russian language), and Russian 203 (Russian Literature in Translation), are recommended.

A comprehensive examination in the Russian language and a special period of Russian literature.

REQUIREMENTS FOR HONORS

Honors in Russian will be awarded on the basis of consistently high quality work in literature, and a research paper. High Honors will be awarded on the basis of further oral examination.

001 ELEMENTARY RUSSIAN

Mr. Schulze

Five periods a week

Russian grammar, conversation and reading. This course meets five times a week with corresponding reduction in outside preparation; three hours credit.

*On sabbatical leave first semester, 1970-71.

101 INTERMEDIATE RUSSIAN

Mrs. Pearce

Four periods a week

Grammar review, reading in Russian classics and contemporary materials, conversation; three hours credit. Prerequisite: a grade of 70 or higher in Russian 001, or the equivalent.

490 COMPREHENSIVE CONFERENCE

COURSES OFFERED AT BRYN MAWR

200 ADVANCED TRAINING IN THE RUSSIAN LANGUAGE Mr. Segall

201 READINGS IN RUSSIAN LITERATURE Miss Nagurski

203 RUSSIAN LITERATURE IN TRANSLATION Miss Nagurski
Not offered in 1970-71.

302 PUSHKIN AND HIS TIME Mrs. O'Connor, Miss de Graaff

303 RUSSIAN LITERATURE OF THE TWENTIETH CENTURY
Miss de Graaff

SOCIOLOGY AND ANTHROPOLOGY

Associate Professor WYATT MACGAFFEY, *Chairman****

Assistant Professor WILLIAM HOHENSTEIN, *Acting Chairman*

Professor A. PAUL HARE

Lecturer LAURA BLANKERTZ†

Lecturer PAUL E. WEHR

Sociology at Bryn Mawr

Professor EUGENE V. SCHNEIDER

Sociology courses at Bryn Mawr and Haverford are intended to be complementary. Students interested in sociology should consult the Bryn Mawr College calendar.

A student majoring in sociology selects a member of the full-time staff as his adviser and develops a program of study acceptable to the adviser as fulfilling the college's general educational aims and as including a coherent and relatively intensive exploration in the discipline of sociology. The department expects such a program to lead to an understanding of past and present theories of social behavior, of their application to concrete examples of interpersonal relations, institutional structure, social conflict and change, and of the methods of sociological

***On sabbatical leave, 1970-71.

†On appointment first semester 1970-71.

research. As soon as possible in his work in this Department the student should take at least the first part of the elementary methods course, Sociology 153d, e, g. In their senior year, all majors participate in the Departmental Studies, Sociology 450b. Programs will include appropriate courses from other departments such as languages, psychology, biology and philosophy. A brief written explanation of each student's program becomes part of the student's advising file, copies being sent to the chairman of the department and the Associate Dean at the time of course registration. Each semester, after the results of the previous semester's work are complete and before registration for the next semester, additions are made to the program in the form of remarks on progress and the reason for changes.

Students intending to specialize in social psychology should see Mr. Hare; in institutional analysis and the classical sociological writers, Mr. Hohenstein; in social anthropology, Mr. MacGaffey. The attention of those interested in anthropology is also drawn to the departmental offerings at Bryn Mawr, Swarthmore and the University of Pennsylvania. Majors are encouraged to include in their programs a semester's involvement in one of the off-campus programs offered by the Center for Nonviolent Resolution of Conflict.

Candidates for Honors in sociology and anthropology are expected to demonstrate high competence and seriousness of purpose in their major courses, to complete a research paper, and to pass the comprehensive review with distinction.

055a SOCIAL CONFLICT

Mr. Wehr

Various theoretical approaches will be applied to analysis of contemporary instances of conflict between groups, organizations and states. The seminar will draw heavily on the works of Lorenz, Coser, Boulding, Dahrendorf, Coleman and Burton. Enrollment limited to fifteen. Prerequisite: consent of the instructor.

Not offered in 1970-71.

056b HISTORY AND THEORY OF NONVIOLENCE

Mr. Wehr

An examination of the philosophical and tactical origins of nonviolence, its development as a change-oriented ideology, and social movements that have developed around it. Thoreau, Tolstoy, Gandhi, King, and certain Quaker pacifists are among the authors to be read and related to contemporary non-violent movements. Enrollment limited to fifteen.

121a THE INDIVIDUAL IN SOCIETY

Mr. Perloe

(See Psychology 121a)

152b AFRICAN SOCIETY

Mr. MacGaffey

An introduction to social anthropology through the study of Subsaharan African peoples. Special attention to kinship and economic institutions, relating patterns of exchange to social structure. Enrollment limited to 30. Not open to seniors.

153d,e,g SOCIAL SCIENCE STATISTICS

Staff

(See *General Courses 153d,e,g*)

155a FOUNDATIONS OF SOCIOLOGY

Mr. Hohenstein

An introduction to the key questions addressed by the major figures in the sociological traditions. In particular the concepts of freedom, responsibility, alienation, class, power, and progress will be examined for their relevance to an understanding of contemporary societies.

159a SOCIOLOGY OF THE FAMILY

Mr. Hohenstein

The course will examine the family as an ongoing social institution. Consideration will be given to forces such as culture, social class, religion, and education which affect family structure. Special attention will be paid to changes and conflicts stemming from difficulties in sex and age role-adjustment. Comparison will be made between the family structures of America and Sweden.

162b ANALYSIS OF INTERPERSONAL BEHAVIOR

Mr. Hare

The aim of the course is to improve the student's abilities to observe, analyze, and understand his own behavior and that of others in everyday interpersonal situations. The class constitutes a self-analytic training group in which the student is expected to demonstrate his abilities by effective participation in the group as well as in periodic written analysis. Problems for analysis are drawn from events in the group.

216a AFRICAN CIVILIZATION Messrs. Glickman or Mortimer or MacGaffey

(See *General Courses—Social Science 216a*)

251a SOCIOLOGY OF CRIME

Mr. Hohenstein

Consideration will be given to: historical overview of criminological theory from Lombroso to the present; social class, race, age, and sex as factors in crime; the place of statistical and individual case studies in the development of theory; and contemporary trends in treating the offender.

252b SOCIAL CHANGE

Mr. Hohenstein

Major theories of social change current in contemporary sociology will be considered. Readings include Marion Levy, Herbert Marcuse, Robert Nisbet, Ralf Dahrendorf and Philip Rieff.

- 253a SOCIOLOGY OF SMALL GROUPS Mr. Hare
Theoretical and experimental analysis of the structure and process of interaction in small discussion, therapy, or work groups. The effects of variables such as leadership, group size, members' personalities, and the communication network will be examined. Class members will conduct and observe experimental groups in the laboratory and use the computer to simulate observed interpersonal behavior.
- 254b SOCIAL ANTHROPOLOGY Mr. MacGaffey
History, theory and method in social anthropology, showing how fundamental assumptions about human nature and social process affect the collection and interpretation of ethnographic data. Outline of fieldwork techniques and experiences. Not open to freshmen.
Students interested in field research practice are invited to take additional half-course (480) in a suitable individual program.
- 257a DYNAMICS OF NONVIOLENCE Mr. Hare
A review of social-psychological theories and other theories of nonviolent direct action. Class discussion will be based on written case material and field observation.
- 349a SOCIAL PSYCHOLOGY OF ATTITUDES Mr. Perloe
(See *Psychology* 349a)
- 352b DATA PROCESSING AND COMPUTER TECHNIQUES Mr. Hare
An advanced course in sociological research methods with emphasis on computer processing of survey data. Students learn to write programs in the FORTRAN computer language and to use basic computer programs for statistical analysis. Problems will include: research design, sampling, scale construction, and the use of statistical tests. Data from actual surveys will be prepared for the computer and analyzed by members of the class using the library of programs at the Computing Center. Prerequisite: Sociology 153d, e, g or the equivalent with the permission of the instructor.
- 354b SOCIOLOGY OF KNOWLEDGE Mr. Hohenstein
An analysis of European and American theories of the social factors which influence and affect the development of knowledge. Emphasis will be placed on the writings of Karl Marx, Emil Durkheim, Karl Mannheim, and Talcott Parsons. Particular consideration will be given to the role of the intellectual in contemporary America and to the epistemological assumptions behind procedural rules in the social sciences. Prerequisite: Sociology 155a, or equivalent with permission of the instructor.
Offered in 1971-72 and alternate years.
- 355a ANTHROPOLOGY OF RELIGION Mr. MacGaffey
(Also called *Religion* 355a)
Contemporary ethnographic work in the field of religion considered in

relation to the most important theoretical contributions, particularly those of French authors. A knowledge of French is helpful but not essential. Not open to freshmen.

356b SEMINAR IN SOCIAL THEORY Mr. Hohenstein

A comparison of the theoretical positions of Karl Marx, Max Weber, and Talcott Parsons. Prerequisite: permission of the instructor.

Offered in 1970-71 and alternate years.

357a POLITICAL ANTHROPOLOGY Mr. MacGaffey

(Also called Political Science 357a)

Selected topics in the comparative study of government and law, including insurrectionary phenomena such as revolution, rebellion, and messianism.

450b SENIOR DEPARTMENTAL STUDIES Staff

Required of majors in their senior year.

480d, e, g, h INDEPENDENT STUDY Staff

Research papers and reading courses on special topics based upon the individual interests of advanced students. Prerequisite: approval of a research or reading proposal by the instructor.

SPANISH

(See Romance Languages)

SPECIAL PROGRAMS OF INSTRUCTION



**FRESHMAN SEMINARS
EDUCATIONAL INVOLVEMENT
URBAN STUDIES
PHYSICAL EDUCATION**

FRESHMAN SEMINARS

Administrative Staff
Professor EDGAR S. ROSE, *Chairman*
Professor FRANK J. QUINN
Associate Dean DAVID POTTER

(See Guidelines for Liberal Education)

Freshmen will take one seminar each semester, which they will choose in consultation with the faculty member teaching the seminar. In most cases the professor who teaches it will be the academic adviser of the students in the seminar so that the seminar will become the focal point of the freshman year from the standpoint of creative advising as well as of intellectual exploration.

Class size is normally limited to twelve students, although there may be some experimentation with classes of 24 students and two faculty members.

In addition to group seminar meetings, there will be tutorial sessions with smaller groups of students and frequent occasions for writing short papers and discussing the work of other students. It is expected that there will be an atmosphere in which there is freedom to experiment with a variety of educational forms.

Grading consists of a brief written evaluation.

The two-year sequence Humanities 101, 102 (*see General Courses*) may be substituted for the Freshman Seminar.

I-A WE WEAR THE MASK

Mr. Aswell

A study of the ways in which both black and white authors have depicted the voluntary and involuntary roles assumed by black men. Aspects of the problem to be examined include: the black as "invisible man;" the act of writing as a form of role-playing; the independent, autonomous life of myths and stereotypes; the interplay between the self-protective and self-deceptive functions of masks. Certain contemporary works will be studied to try to determine whether the purpose and effect of the black man's role-playing have changed. Reading will include works by Wright, Ellison, Fanon, Genêt, Melville, LeRoi Jones, James Weldon Johnson.

I-B THE DIALOGUE: ANCIENT AND MODERN

Mr. Clay

A study of the nature of the dialogue in its Greek origins and of its use as a current term in the language of modern social and political thought. The speeches of epic and history (Homer, Herodotus, Thucydides) lead to the Platonic dialogue which is the main concern of the seminar—especially the

Phaedrus which is the Platonic dialogue on the dialogue. The dialogue of pastoral poetry (Theocritus, Vergil) follows; then the "Aristotelian" dialogue illustrated by Cicero, *On the Nature of the Gods*; Galileo, *Dialogue Concerning the Two Chief World Systems*; and Hume, *Dialogues on Natural Religion*. The last dialogues to be taken up—Plato, *Symposium* and Castiglione, *Courtier*—offer the contrast between the ancient and the early modern dialogue.

I-C UNSOLVED AND UNSOLVABLE PROBLEMS FROM GREEK MATHEMATICS

Mr. Connolly

A study of some of the problems left unsolved by Greek mathematicians such as the angle trisection problem, the N-sided polygon problem, and the attempts to prove Euclid's fifth postulate. The effect that these unanswered questions have had on modern mathematics will be investigated, especially the way in which wholly new theories have blossomed in the successful attempts to solve them. Rudimentary Galois Theory will get particular attention. Some historical material will be presented. Readings will include Boyer, *A History of Mathematics*; Rapport and Wright, *Mathematics*; Rademacher and Toeplitz, *Enjoyment of Mathematics*.

I-D UTOPIAS AND COMMUNAL SOCIETIES

Mr. D'Andrea

An examination of Utopias and communal societies which will seek answers to questions such as the following:

What are the characteristics of Utopian societies? What features of society have been emphasized or eliminated from Utopias? How have some of these ideas worked in planned communities? A study of the psychological and sociological investigations of planned communities (e.g., the kibbutzim) will be made. Students will be invited to help plan the course. Reading will include: Huxley, *Brave New World*; Lewis, *The Story of Utopias*; More, *Utopia*; Plato, *The Republic*; Skinner, *Walden Two*; Zamiatin, *We*.

I-E LITERATURE AND SOCIETY IN REVOLUTIONARY RUSSIA

Mrs. Gerstein

A study in which literary evidence will be considered in an attempt to understand the effect of European experience on a traditional society. Reading will include works by Tolstoy, Dostoevsky, Turgenev, Chekhov, Bunin, Gorky, and end with the Revolution of 1917 seen through the works of Babel and Pilniak. While the historical and sociological approach will be important to this study, the emphasis will be on the treatment of the novels as imaginative literature.

I-F LITERATURE OF THE GHETTO

Mr. Kannerstein

A study concentrated on the experience of black people and Jews in American ghettos. The chief aim of the course will be to make clear the ways in which various writers have portrayed the ghettos, and to achieve an understanding of the individuals who live in them. Reading will include: Cleaver, *Soul on Ice*; DuBois, *The Souls of Black Folk*; Washington, *Up From Slavery*; Paton, *Cry the Beloved Country*; Oliver, *The Meaning of the Blues*; H. Roth, *Call It Sleep*; Abrahams, *Deep Down in the Jungle*; P. Roth, selections from *Portnoy's Complaint*.

I-G THE SELF

Mr. Kosman

A study of various theories and views concerning the nature of the self and self-knowledge. Readings will be from literature, psychology, and philosophy, including, among others, works by Plato, Jung, Sartre, and Hesse.

I-H THE CONDITION OF MAN

Mr. Lester

A study of some recent views of man which have helped to make us what we are; an examination of how we view ourselves and of our guesses as to the future. Readings will engage with evolutionary theory and its implications as seen in imaginative literature, the faith of the existentialist, and selected science fiction.

I-I THE PHENOMENON OF MAN

Mr. Loewy

A historical and analytical study of man as he emerges from his primate ancestry, a tool-making, social, self-conscious being, moving through a series of socio-technical revolutions into an uncertain future. Besides creating an awareness of man as a major ecological phenomenon capable of producing far-reaching changes in the economy of our planet, this seminar is concerned with the interrelationship between commitment and analysis in human thought and in social action. Readings will include: Lynd, *Knowledge for What*; Gaylord Simpson, *The Meaning of Evolution*; LeGros Clark, *History of the Primates*; Morris, *The Naked Ape*; Howell, *Early Man*; Vercors, *You Shall Know Them*; Childe, *Man Makes Himself*; Turnbull, *The Forest People*; Ruesch, *Top of the World*; Kramer, *History Begins at Sumer*; Lorenz, *On Aggression*; Ehrlich, *The Population Bomb*; Ehrenfeld, *Biological Conservation*; de Chardin, *The Phenomenon of Man*.

I-J THE INDIVIDUAL AND HIS SOCIETY IN THE MODERN NOVEL

Mrs. Quinn

An examination of the individual's responsibility to his society and society's responsibility to the individual. Questions such as the following will be examined: To what extent should the individual accept or reject the values of his society? What should be the basis of his acceptance or rejection? What is the individual's responsibility to the social, religious and political life of his society? What is the effect of society's pressures on the individual? What is the effect of the absence of society's restraints on the individual? What is the value of the rebel in society? Is man prepared to accept the responsibilities that go with freedom? Readings will include: Camus, *The Plague*; Conrad, *Heart of Darkness*; Ellison, *Invisible Man*; Faulkner, *Light in August*; Kafka, *The Trial*; Malraux, *Man's Fate*.

I-K MUSICAL DRAMA

Mr. Reese

An examination of selected operas, in whole or in part, with a two-fold purpose: (1) to deal with the basic concepts of text, music and dramatic action, determining the extent to which a synthesis of these concepts has been achieved by the composers in each work, (2) to investigate the role of tragedy and comedy in the works studied. The seminar does not pretend to offer a history of opera nor to follow a chronological pattern of presentation. Representative works and some writings of the following composers will be included in the course of study: Monteverdi, Gluck, Beethoven, Verdi, Wagner, Debussy, Richard Strauss, Berg, Britten.

I-L THE HEROIC EPIC

Mr. Russo

A reading of such masterpieces of "primary" epic as *Gilgamesh*, *Beowulf*, *Song of Roland*, and Icelandic saga, and comparison with Homer's *Iliad* and *Odyssey*. Discussion and tutorial reports will focus on those qualities that distinguish heroic epic from other kinds of epic and the epic hero from the hero of other literary forms; on the role played by archetypal and universal folk-tale patterns in these epics; and on certain qualities that seem to set the Homeric poems apart from the heroic epic tradition in which they originate.

I-M GIANTS OF RUSSIAN FICTION

Mr. Satterthwaite

A study of Dostoevsky's *The Brothers Karamazov* and Tolstoy's *War and Peace*, two disparate yet similar views of the world.

I-N SOME ROOTS OF RADICALISM IN AMERICA

Miss Shumer

A study of the development of the early labor movement in the U.S. from the 1880's to the 1930's. The seminar will deal with, (1) the social conditions that gave rise to union organizing, (2) the ideas and strategy of various organizing attempts, both radical and moderate, and (3) the response of the government and society. Some consideration will be given to contemporary radicalism. Readings will include: Sinclair, *The Jungle*; Dos Passos, *1919*; Preston, *Aliens and Dissenters*; Marine, *Black Panthers Reports to the Commission to Study Violence and Civil Disorders in America*.

I-O MODERN EUROPEAN DRAMA

Mr. Cary

A study, with occasional dramatic readings, of plays by Ibsen, Chekhov, Shaw, Brecht, Eliot, Strindberg, Pirandello, Sartre, Ionesco, Beckett, Pinter, Frisch, and Dürrenmatt.

I-P THE ENVIRONMENTAL CRISIS

Mr. Trela

A study of selected aspects of the interaction between man and his physical environment. The major emphasis will be on global and long-range problems rather than local and short-term problems. There will also be opportunities, through the use of outside speakers who are specialists in these areas, to examine some political, economic, social and moral aspects of the environmental question. Readings will include: Novick, *The Careless Atom*; de Bell, ed. *The Environmental Handbook*; Ehrlich, *The Population Bomb*; Dubos, *Man Adapting*; Ewald, ed. *Environment for Man: The Next Fifty Years*; Wagner, *The Human Use of the Earth*.

FRESHMAN SEMINARS TO BE OFFERED IN SECOND SEMESTER 1970-71, AND IN 1971-72, WILL BE ANNOUNCED.

EDUCATIONAL INVOLVEMENT PROGRAM

For students seeking an academic experience in which they can both learn about and contribute to the solution of urban problems, the Educational Involvement Program provides both full and part-time projects which can be integrated with their academic program. Full-time participants live for a semester in a Philadelphia lower-income neighborhood. While there, they do field-work with community-based organizations, take an on-site seminar taught by Haverford and Bryn Mawr faculty, and participate in an on-campus seminar. The project is counted as one of a student's eight semesters needed for graduation. Two inner-city projects are currently in operation.

Community Organization Assistants Project. Community Organization Assistants live and work in the Germantown section and are assigned to various community agencies and action groups. Working under the supervision of a coordinator, they work in a variety of assignments that range from organizing lower-income tenants in pursuit of their rights, to block-work with neighborhood renewal programs.

The academic component of this project consists of two seminars:

161a,b TOPICS IN COMMUNITY ORGANIZATION

Mr. Elder (first semester), Mr. Galper (second semester)

A weekly on-site seminar built around field-work of participants in the project. Theories of community organization and social change are discussed, illustrated and criticized in the light of field-work experience. Participation limited to students in the project.

SEMINAR ON URBAN PROBLEMS

Students participating in the Community Organization Assistants and School-Community Assistants projects meet regularly with interested faculty and on-campus students in a forum-seminar to discuss issues emerging from field-work experience in the projects. Topic areas are defined by the group, with each faculty participant involved in a block of sessions calling on his particular expertise, and with appropriate readings suggested by him and the field experience of students. Foci for discussion include anti-poverty programs, poverty law, social medicine, social and economic factors in pupil performance, and financing urban education.

This seminar does not ordinarily confer separate academic credit, but on-campus students may, by arrangement with their departmental chairman, take it for a half or whole course credit in the department concerned.

School-Community Assistants Project. School-Community Assistants live and work in a North Philadelphia community where, as employees of a neighborhood school corporation, they work as teaching assistants

in two elementary schools. Field-work activity includes in-service teacher training, the teaching of basic reading and mathematical skills, and the initiation of projects of special interest to School-Community Assistants and the corporation.

The academic component of this project consists of two seminars:

162a,b TOPICS IN URBAN EDUCATION

Mr. Wehr

A weekly on-site seminar built around field-work of participants in the project. The several sections focus on 1) basic teaching techniques, 2) an analysis of the Philadelphia school system, 3) theories of innovative education, and 4) general problems of urban education with an emphasis on the black child. Readings on innovative education, teaching, and the black experience and resource persons from the community and the school system provide a basis for discussion of problems observed in field-work assignments. Participation limited to students in the project.

Forum-Seminar SEMINAR ON URBAN PROBLEMS (See description under Community Organization Assistants project.)

Suburban Involvement Project. Part-time involvement in the Educational Involvement Program centers around nearby suburban communities. A Suburban Involvement Coordinator assists students returning from inner-city projects, and other interested students, in affiliating with suburban institutions and action organizations concerned with problems of racism, economic injustice, and urban violence. Students work as teaching assistants in public schools, and with religious organizations and action groups working for changes in racial attitudes and for opportunities for minorities in metropolitan Philadelphia.

This part-time involvement is often the basis for independent and group study taken for academic credit.

The Educational Involvement Program provides work-study opportunities for three specific groups of students: 1) black students who wish to relate their academic program more closely to their participation in the political and economic development of the black community, 2) social science majors, and 3) other students interested in a thorough understanding of urban problems and the suburban role in their solution.

Anyone interested in participating in Educational Involvement Program projects should see Mr. Wehr or Miss Dickson at the Center for Nonviolent Conflict Resolution located in Yarnall House.

URBAN STUDIES

Assistant Professor SAMUEL GUBINS, *Adviser*

The program in Urban Studies is designed to permit the student to acquire a background of data, methods, and experience relevant to the problems which face cities and to encourage students to focus their studies on these problems and their possible solutions.

Utilizing courses currently offered in several departments, students will focus the methodology and content of various disciplines on urban life. The program is designed to create lasting interest in and concern with the urban milieu. In addition, the program will serve those students contemplating graduate work in history or the social sciences as well as the areas of law, business, journalism, planning, and public service.

MAJOR REQUIREMENTS

Major requirements and the overall course of study will be agreed upon in consultation with the adviser, taking account of the student's special strengths and interests. In planning his schedule a student should anticipate the following requirements:

An introductory course in two of the following fields: economics, political science, psychology, and sociology.

A disciplinary base will be established by taking one of the following sequences of courses:

Economics 101a, b, 209a, 214b, 301a, 304b or 305a.

Political Science 151a or 151b, 223a or 252b, 225b or 220a, 218a, 316b, 258b.

Psychology 136b, 130b, 223a, 235a.

Sociology 153d,e,g, 155a, 159a, 251a, 252b:

A course on quantitative methods;

A senior thesis based on empirical, field or theoretical work;

A senior evaluation. Each student will choose one faculty member to associate with the Urban Studies Adviser in supervising the thesis and the senior evaluation;

Four additional courses which may be chosen from those listed below as well as others offered at the University of Pennsylvania and Swarthmore College.

REQUIREMENTS FOR HONORS

The award of Honors will be determined on the basis of the senior evaluation, course work, and an outstanding paper.

COURSES AT HAVERFORD AND BRYN MAWR COLLEGES

Economics 101a,b

INTRODUCTION TO ECONOMICS

Staff

Economics 208b

PUBLIC FINANCE AND FISCAL
POLICY

Mr. Hubbard

Offered at Bryn Mawr

Economics 209a	ECONOMICS OF URBAN POVERTY	Mr. Gubins
Economics 214b	ECONOMICS OF MINORITIES	
Economics 300b	RESEARCH SEMINAR ON HUMAN RESOURCES, POVERTY, AND URBAN ECONOMICS	Mr. Gubins
Economics 301a	STATISTICAL METHODS IN ECONOMICS	Mrs. Hunter
Economics 302b	INTRODUCTION TO ECONOMETRICS	Mrs. Hunter
Economics 304b	MICROECONOMIC THEORY	Mr. Gubins
Mathematics 118b	PROBABILITY AND STATISTICS	Staff
Mathematics 119a	CALCULUS AND ANALYSIS	Mr. Rosenzweig
Political Science 151a,b	POLITICS: POLITICAL ANALYSIS AND PUBLIC POLICY	Staff
Political Science 218a	URBAN POLITICS <i>Offered at Bryn Mawr</i>	Mr. Ross
Political Science 316b	URBAN AFFAIRS <i>Offered at Bryn Mawr</i>	Mr. Ross
Political Science 252b	RATIONALITY, PURPOSE AND COLLECTIVE WELFARE	Mr. Waldman
Political Science 258b	PUBLIC POLICY: CIVIL RIGHTS AND POVERTY	Miss Shumer
Psychology 015a	CONTEMPORARY PSYCHOLOGICAL TOPICS: ALIENATION AND THE EDUCATIONAL PROCESS	Mr. Heath
Psychology 223a	THEORIES OF PERSONALITY	Mr. Heath
Psychology 235a	PERCEPTION AND COGNITION	Mr. Rowe
Psychology 130b	ANIMAL LEARNING AND ETHOLOGY	Mr. D'Andrea
Psychology 307a	SOCIAL PSYCHOLOGY OF ATTITUDES	Mr. Perloe
Social Science 262b	THE AFRO-AMERICAN EXPERIENCE: SOUTH AMERICA AND THE CARIBBEAN	Mr. Moore
Sociology 153d,e,g	STATISTICS FOR THE SOCIAL SCIENCES	Staff
Sociology 155a	FOUNDATIONS OF SOCIOLOGY	Mr. Hohenstein
Sociology 159a	SOCIOLOGY OF THE FAMILY	Mr. Hohenstein
Sociology 251a	SOCIOLOGY OF CRIME	Mr. Hohenstein
Sociology 252b	SOCIAL CHANGE	Mr. Hohenstein
Sociology 352b	DATA PROCESSING AND COMPUTER TECHNIQUES	Mr. Hare
Sociology 354b	SOCIOLOGY OF KNOWLEDGE	Mr. Hohenstein
Sociology 357a	POLITICAL ANTHROPOLOGY	Mr. MacGaffey



PHYSICAL EDUCATION

DANA W. SWAN, II, *Director of Athletics and Chairman*

Professor WILLIAM DOCHERTY, JR.
 RICHARD O. MORSCH
 ANTHONY J. ZANIN
 RON BARNES

Assistants: FRANCIS E. DUNBAR
 R. HENRI GORDON
 FREDERICK HARTMANN
 GEORGE LEUTE
 JOSEPH MCQUILLAN
 JAMES MILLS
 HOWARD PRICE
 FREDERICK C. SCHULZE, JR.
 OLIVER G. SWAN, JR.
 JOHN B. WILSON

College Physician: WILLIAM W. LANDER, M.D.

The Physical Education Department stresses three elements in its program: the promotion of physical fitness as beneficial to physical and mental health, the attainment of proficiency in sports with lifelong participation value, especially in group endeavor, and the development of sportsmanship and community spirit through intramural and inter-collegiate competition.

The Department aims to guide the student to activities which are commensurate with his level of physical development, while teaching him the physiological and psychological advantages of physical activity.

The Department places special emphasis on providing facilities for, and instruction in, sports with lifelong participation value. Haverford's courses in physical education seek to insure that each student will develop both interest and proficiency in a sport which he can continue after graduation.

The intramural program offers a variety of individual and team activities from which the student may derive the rewards and satisfactions of working with others and of sharing responsibility in a group endeavor. Intramurals also provide an important component in the recreational offerings of the College.

The athletic program as a whole, from basic instruction to intercol-

legiate competition, is concerned with the individual student's development and enjoyment. The sports selected are determined mainly by current student interest.

PROGRAM

The intercollegiate program consists of schedules in 13 sports. Participation in these sports may be substituted for the physical education requirement. The following table summarizes the sports and physical education activities available. Special programs may be arranged with the permission of the Department.

	<i>Intercollegiate</i>		<i>Instructional and Intramural</i>	
FALL:	Football	Cross Country	Golf	*Tennis
	Soccer	Sailing	*Soccer	Weight training
	Cricket		Sailing	**Modern dance
			*Touch Football	
WINTER:	Basketball	Swimming	Badminton	Karate
	Fencing	Wrestling	*Basketball	*Volleyball
			Handball	Weight training
				**Modern dance
SPRING:	Baseball	Sailing	Golf	*Tennis
	Cricket	Tennis	Lacrosse	**Modern dance
	Golf	Track	Soccer	Special physical activities
			*Softball	

*Intramural competition available.

**At Bryn Mawr College.

Evidence of satisfactory physical condition is required by the Department before a student is permitted to participate in any aspect of the program. A swimming test is given to all entering students. This test must be passed by all students before graduation. Swimming instruction is given in the gymnasium pool during the fall and spring.

The outdoor facilities include: Walton Field for football and track with a 440-yard oval and a 220-yard eight-lane straight-away cinder track; 4½-mile cross country course within the campus limits; the Class of '88 - '22 and Merion Fields — which are used for soccer in the fall and softball and lacrosse in the spring; a skating pond, Cope Field for cricket, the Class of '16 Field used for practice football in the fall and baseball in the spring; fifteen tennis courts, six of which are all-weather; a driving range with green and sandtraps for golf practice, and the privileges of Merion West Course for the varsity golf team.

Indoor facilities include the Gymnasium and Alumni Field House. The basement of the Gymnasium contains dressing rooms, showers, lockers, a swimming pool, wrestling room, and training room. Through the generosity of the Class of 1928 it has been possible to provide additional locker and dressing facilities, a new stock room, and a laundry and drying room. A regulation basketball court is on the main floor, with handball and badminton courts.

Alumni Field House, donated by alumni and friends of the College in 1957, provides extensive facilities for additional athletic activities. Included are a 7-lap-mile track and areas for field events, a 120' by 120' indoor dirt "playing field," a batting cage for baseball and cricket, nets for golf, two basketball courts, and two tennis courts. Spectator seating capacity exceeds 1000.



**STUDENT
SERVICES
AND
ACTIVITIES**



HEALTH PROGRAM

The Haverford College health program is under the direction of the College physician, who holds office hours at the Infirmary at stated hours and is available in any emergency. The advice and help of expert medical consultants may be obtained readily at the Bryn Mawr Hospital. When necessary, additional consultants are obtained from one of the university hospitals in Philadelphia. A College nurse is on duty at the Infirmary at all times.

Each student is required to have a complete physical examination by his own physician before entering the College and each year before returning to campus. A report of this examination, on a form supplied by the College and signed by the student's physician, must be submitted to the College physician not later than October 1 each year. Follow-up examinations are given when indicated by the College physician. Influenza vaccine is recommended and given to the entire student body each year, at no additional cost to the student. Immunization against smallpox, tetanus, poliomyelitis, and typhoid fever is required before entering the College. Pre-entrance chest X-ray examination is strongly recommended.

Each student is entitled to unlimited dispensary service, at stated hours, and emergency service at any time.

In case of illness, each student is entitled to two weeks of residence in the Morris Infirmary each semester, ordinary medicine, diagnostic laboratory work, X-rays needed for diagnosis, and the services of the College physician and resident nurse.

Students will be charged \$5 a day for residence in the Infirmary after their first two weeks. Day students will be charged for board in addition, while in the Infirmary.

Each student is also covered by a blanket accident policy which pays actual expenses resulting from any accident up to a limit of \$1000 for each accident. The expenses covered include X-rays, medicine, surgical appliances, hospital bills, nursing care, physician's fee, surgeon's fee, and also dentist's bills for repair or replacement of natural teeth as a result of an accident, subject to the approval of the College physician. The coverage is in force from 12:01 A.M. Standard Time three days before the date when registration of entering students begins until midnight three days after Commencement Day.

All of these services and benefits are covered by the unit fee which is paid by all students.

COUNSELING SERVICES

The College offers counseling for personal, educational, or vocational problems, under the direction of two clinical psychologists and a consultant psychiatrist. When warranted, referral is made to outside sources for psychotherapy in private practice. All student communications with the counseling staff are held in strict professional confidence, as are the names of students counseled.

An important part of the broader function of the counselors is to lead and provide supervision for the "Interact" group program which, in a manner similar to "sensitivity training," seeks to deal with broader concerns of facilitating interpersonal communication, important to community life at Haverford as well as to individual growth. "Interact" groups are open to a limited number of students each year. The goals of the program are to broaden the spectrum of emotional experiences; to provide training in open, honest, but also empathic confrontation of others; to enhance a spirit of group responsibility for each individual; and to promote growth in interpersonal perception.

STUDENT GOVERNMENT

The Students' Association is made up of all students enrolled at Haverford College. The College has delegated to the Students' Association — and the Association has accepted — the responsibility for nearly all aspects of student conduct and of student organizations on the campus. The Students' Association in turn delegates authority to the Students' Council and to the Honor Council to carry on its executive, legislative, and judicial functions.

The Students' Council consists of the five officers composing the Executive Committee of the Students' Association (who are chosen in campus-wide elections) and the Hall Representatives Council.

The Students' Council manages extracurricular activities, exclusive of athletics, and allocates to each organization a percentage of the unit fee. Through its several committees, the Council is involved in almost every facet of student life.

The First Vice-President of the Students' Association presides over the Honor Council, which is composed of three representatives elected by each class. However, the President and the First Vice-President of the Students' Association are automatically among their classes' representatives.

The Honor Council administers all aspects of the honor system and has the responsibility of interpreting specific matters pertaining to the honor system.

HONOR SYSTEM

The honor system at Haverford is based on the belief that students can successfully take the responsibility of establishing and maintaining standards in social and academic life. In the academic area the honor system stipulates that one should distinguish clearly between one's own work and material from any other source. Since examinations are not proctored at Haverford, suitable conduct is required by accepted code. In the social area the guiding principle is respect for women guests and for the College community.

The honor pledge is called to the attention of each applicant for admission to Haverford College:

"I hereby accept the Haverford College honor system, realizing that it is my responsibility to safeguard, uphold, and preserve each part of the honor system and the attitude of personal and collective honor upon which it is based."

Specifically, each student who enters Haverford pledges himself to uphold three responsibilities under the honor system: (1) to govern his own conduct according to the principles which have been adopted by the Students' Association; (2) in case of a breach of the honor system to report himself to the Honor Council; (3) if he becomes aware of a violation by another student, to ask the offender to fulfill his pledge by reporting himself. If the offender refuses, the student is pledged to report the matter to the Honor Council. In this manner each individual becomes personally responsible for the successful operation of the entire honor system.

There are several ways in which the honor system contributes to the quality of student life at Haverford. There is educational value in considering carefully the factors which make standards necessary and in deciding as a group what standards and regulations are needed in the College. It follows that a large degree of self-government is made possible, since students are willing to respect those standards which they themselves have set up.

Each entering student must feel confident before selecting Haverford that he can give his active support to the honor system. He should

realize that its success, which is of great importance to him personally and to the whole student body, and indeed to the College itself, depends upon his willingness to give it his complete support.

Because of the honor system, students at Haverford can schedule their own midyear and final examinations within the period of time set aside for them. The inequities which result when the examination schedule is arranged impersonally are thus eliminated. The system is administered by a student committee cooperating with the recorder, and is perpetuated by serious student commitment to academic responsibility and the honor system.

STUDENT ORGANIZATIONS AND PUBLICATIONS

Haverford students participate in a wide variety of cultural and social activities. The extracurricular life here is less formalized than that of many other colleges. There are many activities and organizations which continue to function year after year and others which flourish when there is sufficient student interest. At Haverford every student is encouraged to join with others in pursuing mutual interests, with the understanding that in this way he will be making the kind of contributions which are so necessary if this small community is to maintain diversity and to provide a rich experience for all its members.

Many of the organizations, such as the Drama Club, various musical groups, and the Modern Dance Club, cooperate with organizations at Bryn Mawr College. Others are more exclusively composed of Haverford students.

A program for chamber music was instituted in 1969 in conjunction with the appointment of the De Pasquale String Quartet and Sylvia Glickman, pianist, as artists-in-residence. The artists-in-residence offer a series of public performances during the year as well as a program of chamber-music coaching. Any student with sufficient instrumental background is eligible to participate.

Publications include the *Haverford-Bryn Mawr College News*, the campus newspaper which appears weekly and semi-weekly on occasion; the *Haverford College Handbook*, published each fall with the help of the Students' Council; and the *Record*, a yearbook. Several literary magazines have, over the past decade, provided an opportunity for publication of literary works by Haverford and Bryn Mawr students. Opportunities for participation by all interested students are available on business and editorial staffs of these publications.

All organizations on the Haverford campus hope to attract committed and imaginative participants. It is also hoped that each student will endeavor to participate in those activities which interest him and to feel especially free to explore new interests while on campus.

COMMUNITY CONCERN

Haverford College has traditionally been concerned with the larger community. In recent years, many students have demonstrated a desire for greater involvement in community concerns during their undergraduate years. There are many ways a Haverford student can find this involvement. He may do it through one of the curriculum-related involvement programs, which may include course work or individual projects. He may participate in Students' Council committees which are involved with both local communities and broader outside concerns. Examples are the Community Relations Committee, which carries on tutoring and recreation programs, and the Social Action Committee, which unites all civil rights, civil liberties, peace, and other groups in a single organization. He may work with the Serendipity Day Camp, which members of the College and local communities operate during the summer for neighborhood children. Haverford students can gain a great deal from working with individuals and groups in off-campus communities, and students, faculty, and administration are continually seeking new avenues for meaningful involvement.

**FELLOWSHIPS,
SCHOLARSHIPS
AND
PRIZES**



ENDOWED FELLOWSHIPS FOR HAVERFORD GRADUATES

CLEMENTINE COPE FELLOWSHIPS, established in 1899 by Clementine Cope, granddaughter of Thomas P. Cope, member of the Board of Managers from 1830 to 1849.

These fellowships are to "assist worthy and promising graduates of Haverford College in continuing their studies at Haverford or at some other institute, in this country or abroad, approved by the Board of Managers."

First and Second Cope Fellows are nominated by the faculty, and selected by the Board of Managers. Individual stipends, not to exceed \$1,000, are determined by the Board.

Letters of application, accompanied by relevant statements of extra-curricular activities, must be in the hands of the President by March 1.

AUGUSTUS TABER MURRAY RESEARCH FELLOWSHIPS, established in 1964 by two anonymous friends "in recognition of the scholarly attainments of Augustus Taber Murray, a distinguished alumnus of Haverford College of the Class of 1885."

These fellowships are for further study in English literature or philology, the classics, or German literature or philology, in other institutions, toward the degree of Doctor of Philosophy or its future equivalent.

Only unmarried students are eligible. Further considerations are the candidate's promise of success in graduate work and the availability of other financial assistance in his proposed field of study.

Usually one Augustus Taber Murray Research Fellow is nominated by the faculty, on recommendation of the Committee on Student Standing and Programs. Individual stipend is \$900. The same student may be awarded the fellowship for two or three years.

Letters of application must be in the hands of the President by March 1.

ENDOWED SCHOLARSHIPS

(It is not necessary for applicants to mention specific scholarships in their applications except in those cases where they meet the special conditions stated for the award.)

1890 MEMORIAL SCHOLARSHIP FUND — Established by a member of the Class of 1923 in memory of his father, of the Class of 1890, and in recognition of his father's friendship with the members of his class. The

income from this fund is to be awarded as a scholarship by the College to a deserving student.

M. A. AJZENBERG SCHOLARSHIP FUND — Established in 1962 in memory of M. A. Ajzenberg, for students planning to major or majoring in physics or astronomy, preferably graduates of public schools in New Jersey or New York City.

JOSEPH C. AND ANNE N. BIRDSALL SCHOLARSHIPS — Scholarships, awarded at the discretion of the faculty to some student or students preparing for medicine, the selection to be based on character, scholarship, and financial need.

CAROLINE CHASE SCHOLARSHIP FUND — Established December 10, 1951, by Caroline Chase, daughter of Thomas Chase, one-time President of the College. This fund is an expression of Thomas Chase's enthusiastic appreciation for the College's high standards of scholarship in Greek, Latin, and English literature.

CLASS OF 1904 SCHOLARSHIP FUND — Established June 4, 1954, in commemoration of the 50th Anniversary of the Class of 1904. The income from this fund, which was contributed by the class and the families of its deceased members, will provide one scholarship.

CLASS OF 1912 SCHOLARSHIP FUND — The fund was given in commemoration of the 50th Anniversary of the Class of 1912. The income is to be used for scholarship purposes, such scholarship being awarded preferably to an African or Asian student, but if no such recipient is available this scholarship may be assigned to some other deserving student.

CLASS OF 1913 SCHOLARSHIP — One scholarship, preference to be given to descendants of members of the Class of 1913 who may apply and who meet the usual requirements of the College.

CLASS OF 1917 SCHOLARSHIP — One scholarship, preference to be given to descendants of members of the Class of 1917 who may apply and who meet the usual requirements of the College.

CLASS OF 1936 SCHOLARSHIP FUND — Established in 1961 by the Class of 1936 as a 25th Anniversary Gift, the income is to be used for scholarship aid without restriction.

W. W. COMFORT FUND — This fund was established in 1947 by the Haverford Society of Maryland. Grants from this fund are made with the understanding that the recipient shall, at an unstated time after

leaving College, repay to the fund the amount which he received while an undergraduate.

J. HORACE COOK FUND — Established in 1955 by a bequest under the will of J. Horace Cook, of the Class of 1881, for a scholarship, one to be awarded each year so that there will be a student in each class receiving his tuition from this fund.

HOWARD M. COOPER SCHOLARSHIP — Upon her death, on April 11, 1966, a gift of part of the residue from a Deed of Trust created by Emily Cooper Johnson, a friend of the College, became effective. This fund is for the establishment of the "Howard M. Cooper Scholarship," the use of which is intended for such students as need assistance to acquire education, preference being given to members of the Religious Society of Friends and especially to those affiliated with Newton Preparative Meeting of Friends of Camden, New Jersey, of which Howard M. Cooper was a life-long member.

THOMAS P. COPE SCHOLARSHIP — One scholarship.

DANIEL E. DAVIS, JR. MEMORIAL SCHOLARSHIP — One scholarship, awarded at the discretion of the faculty, "on the basis of character, scholarship, and financial need."

KATHLEEN H. AND MARTIN M. DECKER FOUNDATION SCHOLARSHIP — Established in 1958, the Kathleen H. and Martin M. Decker Foundation Scholarship is awarded annually to young men preparing themselves in the fields of physics, mathematics, chemistry, and biology. The Scholarship Committee, in making their selections, will have regard for candidates who rank high in scholarship, leadership, and character. At least one scholarship will be given each year with a maximum grant of \$1000. The actual amount of the stipend will be determined by the financial need of the candidate.

JONATHAN AND RACHEL COPE EVANS FUND — Founded in 1952 by the children and grandchildren of Jonathan and Rachel Cope Evans, one half of the income of this fund is to be used for scholarships.

The F of x SCHOLARSHIP — Established by the bequest of Legh Wilber Reid, who died April 3, 1961 and who was the esteemed professor of mathematics at the College from 1900 to 1934. His will provides that the scholarship is to be known as The F of x Scholarship. The scholarship is to be awarded to a student in the sophomore, junior, or senior class who has successfully completed the freshman course in mathematics at Haverford College, who has shown a real interest in mathe-

matics and who has given promise for the future of his work in that subject.

CHRISTIAN FEBIGER MEMORIAL SCHOLARSHIP — One scholarship, established June 13, 1946, by Mrs. Madeleine Seabury Febiger in memory of her husband, Christian Febiger, of the Class of 1900. The income of this fund is applied in paying tuition and other College expenses of worthy, needy students.

ELIHU GRANT MEMORIAL SCHOLARSHIP FUND — Two or more scholarships, established February 2, 1944, by Mrs. Elihu Grant to commemorate the service to Haverford College of Dr. Elihu Grant, from 1917 to 1938 a member of the College faculty. The income from this fund is applied to scholarship assistance to students in humanistic studies, primarily those specializing in the study of Biblical Literature and Oriental subjects. In special circumstances the income may be utilized to assist those working for a postgraduate degree at Haverford College.

ROY THURLBY GRIFFITH MEMORIAL FUND — Established in June 1952, by Grace H. Griffith, in memory of Roy Thurlby Griffith of the Class of 1919. The income from this fund is to be awarded as a scholarship by the College, preference to be given to boys who have no father and who are in need of financial assistance.

SAMUEL E. HILLES MEMORIAL SCHOLARSHIP — One scholarship.

SARAH TATUM HILLES MEMORIAL SCHOLARSHIP FUND — Founded November 1, 1954, by bequest of \$75,534.58 from Joseph T. Hilles, Class of 1888, in memory of his mother, Sarah Tatum Hilles; to provide for such number of annual scholarships of \$250 each as such income shall be sufficient to create; to be awarded by the Managers to needy and deserving students; and to be known as Sarah Tatum Hilles Memorial Scholarships.

ISAAC THORNE JOHNSON SCHOLARSHIP — One scholarship, established in 1916 by a member of the Class of 1881 "to assist worthy young men of Wilmington (Ohio) Yearly Meeting or of the Central West to enjoy the privileges of Haverford College."

MARY M. JOHNSON SCHOLARSHIP — One scholarship.

JACOB P. JONES ENDOWMENT FUND — This fund was established in 1897. The donor stated: "My hope is that under the blessing and favor of God there will come from this source a revenue which shall be

productive of growth and vigor in the institution as well as help at this critical period of their lives to many deserving young men of slender patrimony."

RICHARD T. JONES SCHOLARSHIP — One scholarship.

RUFUS MATTHEW JONES SCHOLARSHIP FUND — Established in 1959 by Clarence E. Tobias, Jr., as a testimonial to Rufus Jones "and in gratitude for the excellent educational facilities Haverford provided for me and my son." The principal and income of this fund are to be used for scholarships or loans to students majoring in philosophy. Preference is to be given to seniors. The recipient will be selected by the chairman of the Philosophy Department in consultation, if he desires, with his departmental associates and in accord with the usual scholarship practice of the College. The donor welcomes additions to the fund from any who might be interested.

GEORGE KERBAUGH SCHOLARSHIP — This fund was established in 1960 in recognition and appreciation of the leadership and personal generosity of George Kerbaugh, Class of 1910, who headed the efforts of the Triangle Society to provide additional stands for Walton Field.

George Kerbaugh's many services to the College include his chairmanship of the committee which raised the funds of the Library addition built in the 1930's. The Board of Managers then expressed to him "its heartfelt appreciation and its sense of great obligation for a notable achievement."

C. PRESCOTT KNIGHT, JR. SCHOLARSHIP — Established by the Haverford Society of New England for a New England boy from a New England school. In the award of this scholarship a committee, composed of alumni of the New England area, will consider character and personal qualities as well as the scholastic record and need of the applicant.

MORRIS LEEDS SCHOLARSHIPS — Established in 1953 by the Board of Managers of the College in memory of Morris E. Leeds, a member of the Class of 1888 and chairman of the Board from 1928 to 1945.

MAX LEUCHTER MEMORIAL SCHOLARSHIP—Established in December 1949, in memory of Max Leuchter, father of Ben Z. Leuchter of the Class of 1946. One scholarship, awarded at the discretion of the faculty, on the basis of character, scholarship, and financial need.

ARCHIBALD MACINTOSH SCHOLARSHIP FUND — This fund was estab-

lished in 1959 and later increased by admirers and friends of Archibald MacIntosh, and is used preferably for scholarship purposes.

JOSEPH L. MARKLEY MEMORIAL SCHOLARSHIP — One scholarship, awarded at the discretion of the faculty, on the basis of character, scholarship, and financial need.

SARAH MARSHALL SCHOLARSHIP — One scholarship.

CHARLES MCCAUL FUND — Established in 1951 by Mary N. Weatherly. One or more scholarships which shall be awarded to students who show special interest in the field of religion and the social sciences.

WILLIAM MAUL MEASEY TRUST — Established in 1952 by the late William Maul Measey, a friend of the College, who was deeply interested in education and who wished to help students of high quality in the pursuit of their education.

J. KENNEDY MOORHOUSE MEMORIAL SCHOLARSHIP — One scholarship, intended for the member of the freshman class who shall appear best fitted to uphold at Haverford the standard of character and conduct typified by the late J. Kennedy Moorhouse of the Class of 1900 — “a man modest, loyal, courageous, reverent without sanctimony; a lover of hard play and honest work; a leader in clean and joyous living.”

W. LACOSTE NEILSON SCHOLARSHIP — Established in 1957 by the family and friends of W. LaCoste Neilson, Class of 1901, in his memory. The income is to be used for the payment of one or more scholarships at the discretion of the College, preference if possible being given to students taking scientific or practical courses rather than those in the field of the arts.

SCHOLARSHIP OF THE NEW YORK HAVERFORD SOCIETY—Established in 1963 for a resident of the New York area who is a member of the freshman class.

PAUL W. NEWHALL MEMORIAL SCHOLARSHIP — One scholarship.

INAZO NITOBÉ SCHOLARSHIP FUND—Established in November, 1955, under the will of Anna H. Chace, the income to be used and applied for the education at Haverford College of a Japanese student who shall be a resident of Japan at the time of his appointment to such scholarship and for his traveling expenses from and to Japan and his living expenses during the period he shall hold such scholarship.

THE JOSÉ PADÍN PUERTO RICAN SCHOLARSHIP FUND—The fund was

established in October 1966 by a gift from Paulina A. Padín in memory of her husband, Dr. José Padín, of the Class of 1907. As both Dr. and Mrs. Padín had their origins in Puerto Rico, the donor desires that this fund should benefit deserving students from that island. The amount of the scholarships, their number and the method of locating such deserving students is to be in the hands of the administration of the College. It is the principal wish of the donor that Puerto Rico should profit by the education of its students at Haverford College and that this fund should be a perpetual memorial for José Padín, who during his lifetime did so much for education in his native land.

LOUIS JAQUETTE PALMER MEMORIAL SCHOLARSHIP — This scholarship is awarded on application, preferably to a member of the freshman class who, in the opinion of a committee representing the donors and the President of the College, shall give evidence of possessing the qualities of leadership and constructive interest in student and community welfare which his friends observed in Louis Jaquette Palmer of the Class of 1894.

READER'S DIGEST FOUNDATION SCHOLARSHIP FUND — This fund was established in July 1965 by a grant of \$2500 from the Reader's Digest Foundation, and substantially increased in 1966 and 1967. The income only is to be used for scholarship purposes.

SCOTT AWARD — Established in 1955 by the Scott Paper Company Foundation. A two-year scholarship award for the junior and senior years, to be given to that student who is planning to embark upon a business career and who is judged by both students and faculty as an outstanding member of the sophomore class.

GEOFFREY SILVER MEMORIAL SCHOLARSHIP—One scholarship, available to a public school graduate in this general area who may enter Haverford.

DANIEL B. SMITH SCHOLARSHIP — One scholarship, awarded in the discretion of the faculty, as an annual scholarship for some young man needing financial aid in his college course. Preference is to be given to a descendant of Benjamin R. Smith, if any such should apply.

JONATHAN M. STEERE SCHOLARSHIP FUND — Established in December, 1948, by Jonathan M. Steere of the Class of 1890. The scholarship is intended primarily for a graduate of Moses Brown School, Providence, R. I., who shall be a member of the Society of Friends.

SUMMERFIELD FOUNDATION SCHOLARSHIP FUND — Established in

February, 1956. One scholarship, awarded at the discretion of the faculty, on the basis of character, scholarship, and financial need.

WILLIAM GRAHAM TYLER MEMORIAL SCHOLARSHIP — Founded in 1949 in memory of William Graham Tyler of the Class of 1858. Preference shall be given to students from Oskaloosa, Iowa, or from William Penn College, on the basis of character, scholarship, and financial need.

A. CLEMENT WILD SCHOLARSHIP — Established May 14, 1951, by Mrs. Gertrude T. Wild in memory of her husband, A. Clement Wild of the Class of 1899. The income from this fund is to be awarded as a scholarship by the College to a deserving student. Preference shall be given to an English exchange student or someone in a similar category.

ISAIAH V. WILLIAMSON SCHOLARSHIP — Three scholarships, usually awarded to members of the senior and junior classes.

CASPAR WISTAR MEMORIAL SCHOLARSHIP — One scholarship, available preferably for sons of parents engaged in Christian service (including secretaries of Young Men's Christian Associations) or students desiring to prepare for similar service in America or other countries.

GIFFORD K. WRIGHT SCHOLARSHIP FUND—Established in December, 1955, in memory of Gifford K. Wright of the Class of 1893.

EDWARD YARNALL SCHOLARSHIP — One scholarship.

ROBERT MARTIN ZUCKERT MEMORIAL SCHOLARSHIPS — Two or more scholarships, preference to be given to a native of New York or Connecticut who now resides in one of those states.

PRIZES AND AWARDS

ALUMNI PRIZE FOR COMPOSITION AND ORATORY — A prize of \$50 was established by the Alumni Association in 1875 to be awarded annually for excellence in composition and oratory. Competition is open to freshmen and sophomores, but the same man may not receive the prize twice. The competition for this prize is administered by the Department of English.

JOHN B. GARRETT PRIZES FOR SYSTEMATIC READING — A first prize of \$150 and a second prize of \$75 will be given at the end of the sophomore, junior, or senior year to the two students who, besides creditably pursuing their regular course of study, shall have carried on the most profitable program of reading in a comprehensive topic during a full college year.

Candidates for these prizes must register with the chairman of the department under whose supervision the work will be performed. The department is responsible for guiding the work and, not later than April 15, for reporting the achievement to the Committee on Student Standing and Programs, for final judgment. Either or both of these prizes may be omitted if, in the judgment of the committee, the work does not justify an award.

Interested students should apply directly to a relevant department for information.

CLASS OF 1896 PRIZES IN LATIN AND MATHEMATICS — Two prizes of \$10 each, in books, to be known as the Class of 1896 Prizes in Latin and Mathematics, were established by the bequest of Paul D. I. Maier of the Class of 1896. They are awarded at the end of the sophomore year to the students who have done the best work in the departments concerned.

LYMAN BEECHER HALL PRIZE IN CHEMISTRY — An annual prize of \$100 was established by the Class of 1898 on the 25th anniversary of its graduation, in honor of Lyman Beecher Hall, Professor of Chemistry at Haverford College from 1880 to 1917.

This prize may be awarded to a student who has attained a high degree of proficiency in chemistry and who shows promise of contributing substantially to the advancement of that science. It may be awarded to a junior, to a senior, or to a graduate of Haverford College within three years after graduation. It may be awarded more than once to the same student, or it may be withheld.

CLASS OF 1902 PRIZE IN LATIN—A prize of \$10, in books, is offered annually by the Class of 1902 to the freshman whose work in Latin, in recitation and examinations combined, shall be the most satisfactory. At the discretion of the professor in charge of the department, this prize may be omitted in any year.

DEPARTMENT PRIZE IN MATHEMATICS — A first prize of \$30 and a second prize of \$20 are awarded on the basis of a three-hour examination on selected topics in freshman mathematics. The examination is held annually on the first Monday after the spring recess, and is open to freshmen only.

ELLISTON P. MORRIS AND ELIZABETH P. SMITH PEACE PRIZES — These have been combined into a single competition offering three

awards of \$400, \$200 and \$100 respectively. It is open to all undergraduates and to graduate students.

The prizes are awarded for the best essays bearing on the general topic of "Means of Achieving International Peace." Essays should be deposited with the Recorder not later than May 1. The judges shall be appointed by the President of the College. Prizes will not be awarded, if, in the opinion of the judges, a sufficiently high standard of merit has not been attained.

PRIZES IN PHILOSOPHY AND BIBLICAL LITERATURE — A first prize of \$40 and a second prize of \$25, in books, are offered annually to the students who, in the judgment of the professor in charge, do the most satisfactory outside reading in philosophy in connection with the courses in that department.

A first prize of \$40 and a second prize of \$25, in books, are offered annually to the students who, in the judgment of the professor in charge, do the most satisfactory reading on the Bible and related subjects.

SCHOLARSHIP IMPROVEMENT PRIZES — A first prize of \$50 and a second prize of \$45 are awarded at the end of the senior year to the two students who, in the opinion of the judges appointed by the President of the College, show the most steady and marked improvement in scholarship during their college course.

FOUNDERS CLUB PRIZE — A prize of \$25 is awarded annually by the Founders Club to the freshman who is judged to have shown the best attitude toward College activities and scholastic work.

S. P. LIPPINCOTT PRIZE IN HISTORY — A prize of \$100 is offered annually for competition in the Department of History under the following general provisions:

First — Competition is open to sophomores, juniors, and seniors who have taken or are taking work in the Department of History.

Second — The prize shall not be awarded twice to the same student.

Third — The prize may be withheld in any year if, in the opinion of the judges, a sufficiently high standard of merit has not been attained.

Fourth — An essay of not less than 5000 words, written in connection with course or *honors* work in history, or independently of course work, treating a subject selected with the approval of a member of the History Department, shall be submitted as evidence of scholarly

ability in the collection and presentation of historical material. It shall be typewritten and deposited with the Recorder not later than May 1.

NEWTON PRIZE IN ENGLISH LITERATURE — A prize of \$50 established by A. Edward Newton may be awarded annually on the basis of *final honors* in English, provided that the work of the leading candidate, in the judgment of the English Department, merits this award.

WILLIAM ELLIS SCULL PRIZE — A prize of \$50, established in 1929 by William Ellis Scull, Class of 1883, is awarded annually to the upper-classman who shall have shown the greatest achievement in voice and in the articulation of the English language. This prize is administered by the English Department.

GEORGE PEIRCE PRIZE IN CHEMISTRY OR MATHEMATICS — A prize of \$50 in memory of Dr. George Peirce, Class of 1903, is offered annually to a student of chemistry or mathematics who has shown marked proficiency in either or both of these studies and who intends to follow a profession which calls for such preparation. Preference is to be given to a student who has elected organic chemistry, and failing such a student, to one who has elected mathematics or some branch of chemistry other than organic. Should there be two students of equal promise, the one who is proficient in Greek shall be given preference. The prize is offered, however, exclusively for students who have expressed the intention of engaging in research.

EDMUND J. LEE MEMORIAL AWARD — Classmates of Edmund Jennings Lee, Class of 1942, who lost his life in the service of his country, have established in his memory a fund, the income from which is to be given annually to that recognized undergraduate organization which has contributed most toward the furtherance of academic pursuits, extra-curricular activities, spiritual growth, or college spirit in individuals or in the College as a whole during the year. The award is to be used in continuing to render such service.

WILLIAM W. BAKER PRIZE IN GREEK — A prize of \$25, in books, established in 1954 in memory of William W. Baker, professor of Greek at Haverford College from 1904 to 1917, is given in the study of Greek, and is administered by the Classics Department.

KURZMAN PRIZE IN POLITICAL SCIENCE — A prize of \$125, established in 1958 by Harold P. Kurzman, is awarded annually for the senior who has performed best and most creatively in political science, except when in the judgment of the department no student has done work of sufficient merit to warrant such award.

HAMILTON WATCH AWARD — A Hamilton watch is awarded to that senior, majoring in one of the natural sciences, mathematics, or engineering, who has most successfully combined proficiency in his major field of study with achievements, either academic or extracurricular or both, in the social sciences or humanities.

JOHN G. WALLACE CLASS NIGHT AWARD — A silver cup to be awarded annually to the best actor in the Class Night performances.

PRIZES FOR EXCELLENCE IN THE FRENCH LANGUAGE — The French Department may recommend to the Associate Dean the names of two students in French 022 who, in its opinion, are worthy of the award of a full scholarship to the Summer in Avignon Program of Bryn Mawr College (covering all but transportation). These two scholarships will be awarded upon approval of the Associate Dean and acceptance of the applicant by Bryn Mawr College, as the First and Second Prize for Excellence in the French Language.

THE VARSITY CUP — An award given to the member of the Senior Class who excels in leadership, sportsmanship, and athletic ability.

STEPHEN H. MILLER MEMORIAL AWARD — His friends have established in his memory an award which is to be given to that graduating political science major who best exemplifies the ideal of political involvement and social service expressed in the life and career of Stephen H. Miller, 1962, who lost his life while serving his country and his fellow man, taking part in village development in Vietnam.



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CORRESPONDENCE DIRECTORY

For information on:

Write to:

ACADEMIC AND FACULTY AFFAIRS	Gerhard E. Spiegler <i>Provost and Dean of the Faculty</i>
ACADEMIC STUDENT AFFAIRS	David Potter <i>Associate Dean of the College</i>
ADMISSIONS AND CATALOG REQUESTS	William W. Ambler <i>Director of Admissions</i>
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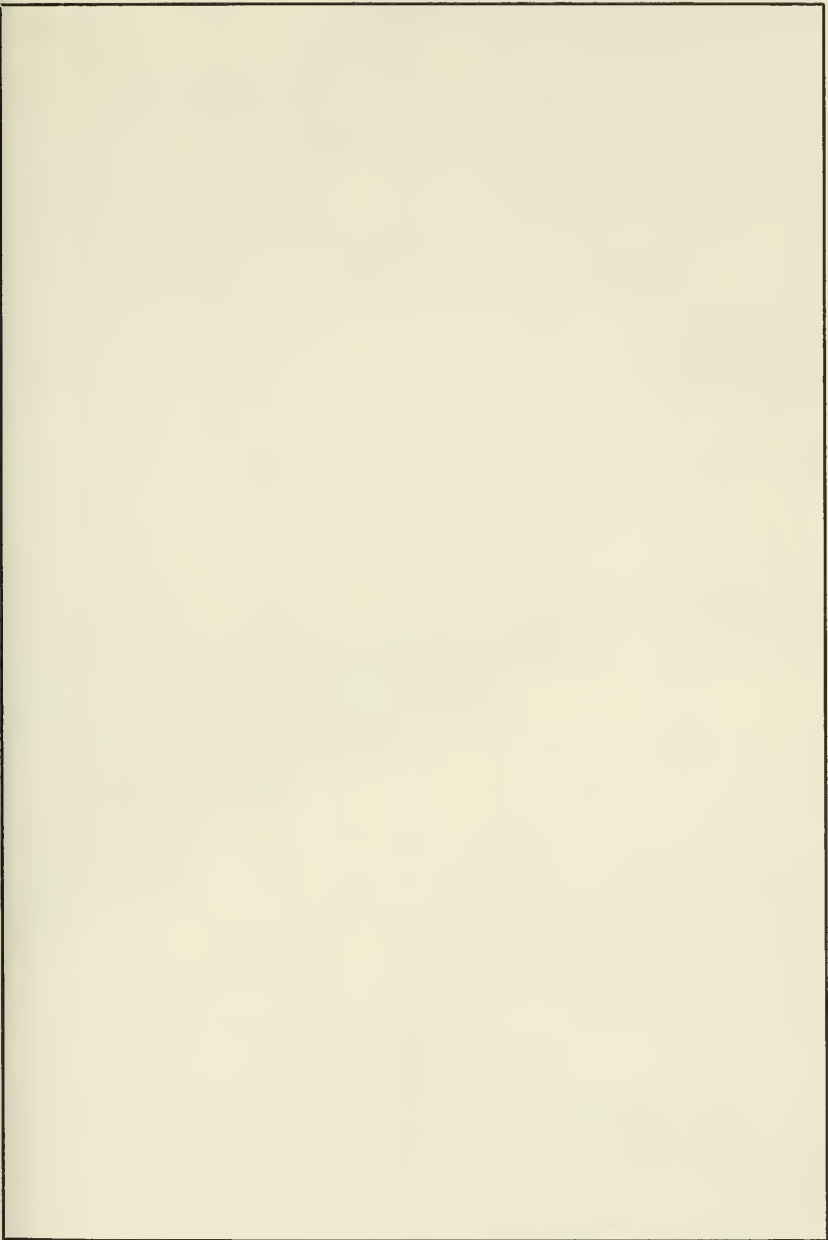
NOTES

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NOTES

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Haverford College

TREASURER'S REPORT

1969-70

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STATED MEETINGS OF THE CORPORATION AND THE MANAGERS

The annual meeting of The Corporation of Haverford College is held in Tenth Month at such time and place as the Board of Managers may determine. The stated meetings of the managers will be held on the fourth Sixth-day of First, Third, Fifth, Ninth and Eleventh months.

REPORT OF THE TREASURER

PRESENTED AT THE ANNUAL MEETING OF THE CORPORATION OF

HAVERFORD COLLEGE

October 23, 1970

TO THE CORPORATION AND THE BOARD OF MANAGERS:

Your Treasurer has again the privilege of reporting on the fiscal year of the College ending June 30, 1970. The report of Price Waterhouse & Co., the auditors is attached.

OPERATIONS

Again this year I must report what might be called in college circles a minor deficit of \$142,943. However, the difficulty is that there must be added to this, due to our unfunded debt from construction and from past deficits of \$425,311 representing interest on a bank loan outstanding on June 30th in the amount of \$2,975,000, and on the debt owed our Consolidated Investments account from securities sold from it.

Our total income, restricted and unrestricted, for the year was \$5,224,908, as contrasted with \$4,510,887 of a year ago; and our total expenses were \$5,367,851 as contrasted with \$4,570,396 of last year.

Income from endowment and trusts (including interest paid on uninvested funds) was \$1,278,207. Up from a year ago by \$92,529 and from alumni \$166,487 up from \$136,391 or 22% up from a year ago.

On the expense side those for education and general expenses including \$550,742 for sponsored research were \$3,885,676, for auxiliary enterprises \$852,295 and for student aid \$629,880, this last figure includes \$196,726 foundation support for the Post Baccalaureate program, leaving \$433,154 for under-graduate purposes.

ENDOWMENT

Our Consolidated Investment account at the end of June had a market value of \$16,607,323 and a book value of \$16,434,521 of this amount \$7,222,806 represents realized gains, so that the actual cost of these securities now held was \$9,211,715. The Philip's account had a market value of \$4,321,570 and a book value of \$5,102,189 of which figure \$3,208,151 again represents realized capital gains. In the Measey Trust there was on June 30, a market value of \$2,791,719 and a book value of \$2,187,373, of this book value \$1,194,290 also represents realized capital gains.

Two things must be kept in mind about our Consolidated Investments account; one is the well known decline in prices on the stock market, and another is that we have withdrawn from our own funds for construction purposes \$3,992,728 and for accumulated operating deficits \$1,110,364. The falling off in the value of stocks and bonds is also shown by our unit value which was \$26.17 this June 30, instead of \$30. a year ago. However, our unit income rose 4¢ from \$1.30 to \$1.34.

The rate of return on market value for our Consolidated Investment account was 5.67%, on Philips 5.79%, and on the Measey Trust 4.73%.

The classification of investments at market value is as follows:

Bonds	23.78%
Preferred stocks	1.62%
Common stocks	30.74%
Cash and Advances to	
Current Funds	33.05%
College Real Estate	6.84%
Mortgages	2.26%
Miscellaneous	1.71%
	<u>100.00%</u>

Note should be made that the "cash and advances to current funds" are derived almost entirely from sales of common stocks, thus making a distortion in the true picture of our normal holding

in common stocks of from 60 to 70%.

GIFTS AND ADDITIONS TO FUNDS

This year additions to Endowment Funds total \$148,366. I should like to call special attention to one of these, a bequest by C. Reed Cary which has been with the approval of his children, allocated to the renovation of Barclay Hall and the Student Center, also substantial gifts for Barclay in addition to many other benefits given the College from Lydia Stokes and James P. Magill.

BARCLAY HALL RENOVATION

The decision to completely renovate Barclay Hall having been made, keeping the same suite set-up, the actual work began immediately at the close of College early in June. It is expected that the work will be completed by February next, and the cost will be in the neighborhood of \$650,000, instead of well over \$900,000, the cost of a new dormitory. I am inclined to think that this decision has met with favor by students, faculty and alumni alike.

As an historical note, Barclay was contemplated and the money necessary for its construction, \$80,000, raised in the 1860's. After a long period of construction, the building was opened in the Fall of 1877. The architect was Addison Hutton, a Friend, who also designed Taylor and Merion Halls at Bryn Mawr College a decade later.

Here I would like to digress from my financial report to add a word about Addison Hutton and about the use of Barclay Hall at the time of its construction. Hutton was the son of a carpenter and was born in Western Pennsylvania. He was the grandfather of Elizabeth Yarnall (Mrs. D. Robert Yarnall) and Dorothy James (Mrs. J. Robert James) and was, with the exception of eight months

formal schooling, completely self-taught. He designed among many well known buildings not only Barclay, Taylor and Merion Halls, but the large building that is now Westtown School, and also the principal building at George School, the large Methodist Church now standing at the corner of Broad and Arch Streets, and what was until very recently the Ridgway Branch of the Philadelphia Library Company on South Broad Street. This latter building was once called, the culmination and the end of classic architecture in Philadelphia.

And one more word about Barclay, in 1877, students at Haverford prior to its construction studied together under the strict eye of a professor, but, as the History of Haverford College states, "By the arrangement of the new building each student has the privilege of a separate bedroom. Each pair of these rooms opening into a private parlor or study room for the exclusive use of two students.....individual responsibility and the sense of increased advantages in the unspeakable privilege of private uninterrupted study, and the feeling that the student himself was chiefly concerned as to whether he was improving his opportunities, led to results which no other system of watching and restraint could ever produce. With the exception of the evening collection for reading the Bible and the rule of extinguishing the lights at 10:00 o'clock, there were few interruptions to the absolute and untrammelled freedom of an orderly youth." Remember that this was 1877 and not the present.

THE FUTURE

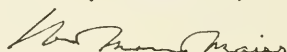
To overcome the large, at least for us, annual deficit there would appear to be two things which we can do and a third which we may also be able to do gradually but only in connection with other colleges of our standing, namely raises in tuition.

The first of these two and the one on which I trust some reliance may be placed is to largely increase our annual giving. The average Haverford alumnus is neither very rich nor very poor, but from following the results of our yearly annual giving campaigns, I am convinced that these alumni, if properly induced, can without too much pain seriously increase their yearly gifts. This year showed 22.1% increase in giving by alumni over the results of a year ago, and by using our considerable powers of persuasion, we should be able to increase this percentage annually to a point where it will have a very real impact on our budget, perhaps sufficient to balance it.

The second thing which we can do is to lay much greater stress on bequests and to have many more of our alumni put the College in their wills--hopefully for unrestricted purposes. The bequests over the past ten years have been few and modest in amounts, there being only ten of them, averaging \$86,000 a year, and this includes one single bequest of \$346,000. There is no doubt that the Administration of the College is trying very hard to hold the line on expenses. However, in administering a college of our small size and standing there is an irreducible minimum of expenditures below which we cannot go. In fact the total cost of educating a student at Haverford is \$8200, and the room, board and tuition \$3800 which leaves \$4400 to be met by endowment, annual giving and unrestricted donations.

I think we can and must make a strong effort to do all of the things mentioned, and I feel confident that we do have a future in the educational field, continuing our high standing, and that we will so act as to secure that future.

Respectfully submitted,



October 14, 1970

Board of Managers

The Corporation of Haverford College

We have examined the balance sheet of the Corporation of Haverford College as of June 30, 1970 and the related statements of operations and changes in fund balances and unexpended gifts, grants and income for the year then ended. Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances, including confirmation of marketable securities by correspondence with the depository. It was impracticable for us to extend our examination of contributions received beyond accounting for amounts so recorded.

The College follows the practice of writing off property and plant additions as their cost is funded. Accordingly, the cost of College property, other than certain residences which are included in endowment fund assets and unfunded construction costs, is not reflected in the accompanying statements.

In our opinion, except that the cost of College property is not fully reflected, as described in the preceding paragraph, the accompanying financial statements present fairly the financial position of the Corporation of Haverford College at June 30, 1970 and the results of its operations and changes in fund balances and unexpended gifts, grants and income for the year in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Price Waterhouse & Co.

THE CORPORATION OF HAVERFORD COLLEGE

Balance Sheet

	<u>Assets</u>	<u>June 30,</u>	
		<u>1970</u>	<u>1969</u>
<u>General fund</u>			
Cash		\$ 651,496	\$ 647,440
Accounts receivable - Faculty and students		129,125	69,560
- Others		54,377	38,707
Bookstore inventory, at cost		24,281	23,613
Prepaid expenses and other assets		18,437	34,832
Deferred charges		39,744	13,006
		<u>\$ 917,460</u>	<u>\$ 827,158</u>
<u>Loan funds - Note 2</u>			
Cash		\$ 38	\$ 38
Accrued interest receivable		12,939	10,910
Loans to students		354,440	298,405
		<u>\$ 367,417</u>	<u>\$ 309,353</u>
<u>Endowment fund</u>			
Marketable securities, at cost (market value			
\$15,128,214 in 1970, \$21,415,422 in 1969)		\$17,167,000	\$18,236,562
Mortgages		375,525	321,019
College real estate - at cost less amortization			
of \$236,712 in 1970 and \$216,098 in 1969		1,139,528	1,152,078
Other investments		60,146	53,516
		<u>18,742,199</u>	<u>19,763,175</u>
Advances to other funds - Note 3			
General fund		1,149,268	305,525
Loan fund		224,195	224,195
Plant fund		3,992,728	3,153,411
		<u>5,366,191</u>	<u>3,683,131</u>
		<u>\$24,108,390</u>	<u>\$23,446,306</u>
<u>Plant fund</u>			
Unfunded costs of completed construction		\$ 7,456,986	\$ 4,313,616
Construction in progress (additional			
commitments approximate \$475,000)		142,379	2,760,056
Joint Computer Center		188,363	
Marketable securities			69,463
Other assets			15,276
		<u>\$ 7,787,728</u>	<u>\$ 7,158,411</u>
		<u>\$33,180,995</u>	<u>\$31,741,228</u>

	June 30,	
	1970	1969
<u>Liabilities and Fund Balances</u>		
<u>General fund</u>		
Liabilities		
Accounts payable	\$ 200,641	\$ 263,799
Accrued expenses	185,841	134,962
Advance receipts	29,628	7,521
Advance from endowment fund - Note 3	1,149,268	305,525
	<u>1,565,378</u>	<u>711,807</u>
Unexpended gifts, grants and income - Note 1		
Donations for special purposes	325,647	443,664
Special purpose endowment income	80,888	128,149
Post-Baccalaureate program	25,263	120,989
Faculty and sponsored research	(46,775)	(175,278)
	<u>385,023</u>	<u>517,524</u>
General fund balance		
Restricted	77,423	132,437
Income reserve (deficit)	(1,110,364)	(534,610)
	<u>(1,032,941)</u>	<u>(402,173)</u>
	<u>\$ 917,460</u>	<u>\$ 827,158</u>
<u>Loan funds</u>		
Advance from endowment fund - Note 3	\$ 224,195	\$ 224,195
Loan fund balances - Note 2	143,222	85,158
	<u>\$ 367,417</u>	<u>\$ 309,353</u>
<u>Endowment fund</u>		
Endowment fund principal	\$17,097,207	\$17,065,052
Undistributed gains on consolidated investments	6,987,983	6,358,054
	<u>24,085,190</u>	<u>23,423,106</u>
Funds functioning as endowment	23,200	23,200
	<u>\$24,108,390</u>	<u>\$23,446,306</u>
<u>Plant fund</u>		
Demand notes payable to banks at prime and 1/2% above prime rate	\$ 2,975,000	\$ 3,175,000
3-5/8% Housing and Home Finance Agency dormitory mortgage bonds, due through 2013	820,000	830,000
Advance from endowment fund - Note 3	3,992,728	3,153,411
	<u>\$ 7,787,728</u>	<u>\$ 7,158,411</u>
	<u>\$33,180,995</u>	<u>\$31,741,228</u>

THE CORPORATION OF HAVERFORD COLLEGE

Statement of Changes in Fund Balances and Unexpended

Gifts, Grants and Income

Year Ended June 30, 1970

	<u>Restricted fund balance</u>	<u>Income reserve (deficit)</u>
Balance - July 1, 1969	\$132,437	\$(534,610)
Net decrease from operations		(578,254)
Restricted gifts, grants and income - development program		
- other		2,500
Realized gains (net)		
Donations and transfers to principal		
Interfund transfers		
Restricted gifts, grants and endowment income expended in current year		
Net interest income (expense) for the year		
Life interest payments		
Special purpose funds liquidated	(55,014)	
Miscellaneous transfers		
Applied to unfunded construction		
Computer center capital costs		
Transfer of computer center cost to plant fund		
Unreimbursed expenditures for computer center		
Balance - June 30, 1970	<u>\$ 77,423</u>	<u>\$(1,110,364)</u>

* Includes joint computer center capital expenditures and related joint funding.

General Fund

<u>Donations for special purposes</u>	<u>Special purpose endowment income</u>	<u>Post-Bacca- laureate program</u>	<u>Faculty and sponsored research*</u>	<u>Loan fund balance</u>	<u>Endowment fund principal</u>
\$443,664	\$128,149	\$120,989	\$(175,278)	\$ 85,158	\$23,423,106
100,259					
317,170	422,783	101,000	642,389		
					876,292
	(13,206)				150,270
(82,710)			7,334	64,073	11,303
(408,580)	(437,423)	(196,726)	(548,320)		
				(6,009)	
	(64,095)				
	45,000				(57,574)
(13,131)	(320)				
(31,025)					(318,207)
			(115,395)		
			188,363		
			(45,868)		
\$325,647	\$ 80,888	\$ 25,263	\$ (46,775)	\$143,222	\$24,085,190

THE CORPORATION OF HAVERFORD COLLEGE

Statement of Operations

	Year ended June 30,		
	1970		1969
	<u>General sources</u>	<u>Restricted sources</u>	<u>Total</u>
	(Note 1)		
<u>Income</u>			
Student fees	\$1,491,276		\$1,491,276
Endowments and trusts	840,784	\$ 437,423	1,278,207
Gifts and grants	208,527	1,153,626	1,362,153
Auxiliary enterprises	909,617		909,617
Rental of facilities and other	173,722	9,933	183,655
	<u>3,623,926</u>	<u>1,600,982</u>	<u>5,224,908</u>
<u>Expenses</u>			
Educational and general			
Administration	307,819	69,538	377,357
Student services	241,343	1,400	242,743
Staff benefits	305,734	12,908	318,642
General institutional	181,816	106,476	288,292
Instruction	1,001,077	186,919	1,187,996
Libraries	175,128	98,686	273,814
Maintenance and operations	569,775	2,783	572,558
Sponsored research	5,000	545,742	550,742
Computer center	63,599	9,933	73,532
	<u>2,851,291</u>	<u>1,034,385</u>	<u>3,885,676</u>
Auxiliary enterprises	851,761	534	852,295
Student aid	63,817	566,063	629,880
	<u>3,766,869</u>	<u>1,600,982</u>	<u>5,367,851</u>
Net deficit resulting from college operations	(142,943)		(142,943)
Interest expense - general and plant funds - Note 3	(425,311)		(425,311)
Amortization of mortgage principal	(10,000)		(10,000)
Net decrease in general fund balance - Note 1	\$ (578,254)		\$ (578,254)
			\$ (224,161)

Notes to Financial Statements

Note 1 - Unexpended gifts, grants and income

The College follows the practice of reflecting restricted gifts, grants and endowment income in the statement of operations only to the extent of expenditures from such funds during the year. The unexpended balances are increased or decreased by the differences between restricted amounts received and those actually expended in each year. This method of reporting is generally acceptable for colleges.

Note 2 - Loan funds

Loan funds comprise the Class of 1934 Revolving Loan Fund, established in 1959 by gifts from the Class of 1934 (100% participation) in the amount of \$10,784, and the Haverford College Loan Fund established in 1926. At June 30, 1970, pertinent information as to each fund is as follows:

	Class of <u>1934</u>	1926 <u>fund</u>	<u>Total</u>
Student loans outstanding	\$94,787	\$259,653	\$354,440
Advance from endowment fund	50,891	173,304	224,195
Fund balance	45,044	98,178	143,222

The student loans outstanding bear interest at varying rates and are payable ten years after the student completes his formal education. Of the total loans outstanding at June 30, 1970, balances aggregating \$39,511 are currently payable.

Note 3 - Interest expense

Interest is charged on interfund advances from the endowment to the general and plant funds at 4-1/2% which approximates the average rate of return on endowment fund investments. The advance to the loan fund bears interest at the rate of 4%.

The college follows the practice of capitalizing interest relating to income-producing properties while such properties are under construction. Accordingly, interest charges of \$65,000 and \$127,205 have been capitalized in 1970 and 1969, respectively, applicable to the construction of the dining center and dormitories.

HAVERFORD COLLEGE
DETAILED REPORT OF COLLEGE

Statement of Income

30 June 1970

	<u>Unrestricted</u>	<u>Restricted</u>	<u>Total</u>
1. <u>Educational and General</u>			
A. <u>Student Fees</u>			
Tuition			
Cash	\$1,039,056.99	\$	\$1,039,056.99
Scholarship and General Funds	130,024.58		130,024.58
Wm. Maul Measey Trust	66,223.00		66,223.00
Donations	141,475.43		141,475.43
	\$1,376,780.00	\$	\$1,376,780.00
Unit Fee	101,605.00		101,605.00
Other Fees	12,891.00		12,891.00
<u>Total Student Fees</u>	\$1,491,276.00	\$	\$1,491,276.00
B. <u>Endowment Income</u>			
From Unrestricted Funds	\$ 833,581.14	\$	\$ 833,581.14
From Restricted Funds			
Library		24,289.59	24,289.59
Special		211,178.96	211,178.96
Stock Dividends	7,203.11		7,203.11
<u>Total Endowment Income</u>	\$ 840,784.25	\$ 235,468.55	\$1,076,252.80
C. <u>Gifts and Grants</u>			
Alumni	\$ 208,526.66	\$ 53,362.18	\$ 261,888.84
Business Corporations		148,858.94	148,858.94
Foundations			
Other			
Donations		208,937.67	208,937.67
Sponsored Research		545,741.71	545,741.71
<u>Total Gifts and Grants</u>	\$ 208,526.66	\$ 956,900.50	\$1,165,427.16
D. <u>Organized Activity</u>			
Computer Center	\$ 16,392.51	\$ 9,933.00	\$ 26,325.51
E. <u>Other Sources</u>			
Rental of Facilities & Miscellaneous	\$ 157,329.06	\$	\$ 157,329.06
<u>Total Educational and General</u>	\$2,714,308.48	\$1,202,302.05	\$3,916,610.53
11. <u>Auxiliary Enterprises</u>			
Athletics	\$ 388.50	\$	\$ 388.50
Dormitories and Dining Room	675,791.15		675,791.15
Faculty Housing	89,379.21		89,379.21
Bookstore	140,914.54		140,914.54
Infirmary	2,182.77		2,182.77
Coop	961.27		961.27
<u>Total Auxiliary Enterprises</u>	\$ 909,617.44	\$	\$ 909,617.44
111. <u>Student Aid</u>			
Scholarships and Fellowships	\$	\$ 200,673.58	\$ 200,673.58
Prizes		1,280.00	1,280.00
Post - Baccalaureate Program		196,726.42	196,726.42
<u>Total Student Aid</u>	\$	\$ 398,680.00	\$ 398,680.00
<u>Total Income</u>	\$3,623,925.92	\$1,600,982.05	\$5,224,907.97

HAVERFORD COLLEGE
DETAILED REPORT OF COLLEGE

<u>Statement of Expenditures</u>		<u>30 June 1970</u>		
		<u>Unrestricted</u>	<u>Restricted</u>	<u>Total</u>
1. <u>Educational & General Administration</u>				
A-1. <u>Administration</u>				
President's Office	\$ 59,292.97	\$ 7,674.76		\$ 66,967.73
Provost's Office	35,514.21			35,514.21
Ad Hoc Committee	5,233.27			5,233.27
A-2. <u>Financial</u>				
Treasurer's Office	26,408.72			26,408.72
Development Office	47,302.74	61,863.09		109,165.83
Business Office	134,067.24			134,067.24
<u>Total Administration</u>	<u>\$307,819.15</u>	<u>\$ 69,537.85</u>		<u>\$377,357.00</u>
B. <u>General Expenses</u>				
B-1. <u>Student Services</u>				
Admissions	\$ 66,368.85	\$		\$ 66,368.85
Registrar	18,096.32			18,096.32
Dean of College	21,439.57			21,439.57
Dean of Students	30,927.56			30,927.56
Buildings and Grounds	26,293.97			26,293.97
Guidance Counsellor	22,203.03			22,203.03
Student Activities	56,013.23	1,400.00		57,413.23
<u>Total Student Services</u>	<u>\$241,342.53</u>	<u>\$ 1,400.00</u>		<u>\$242,742.53</u>
B-2. <u>Staff Benefits</u>				
<u>Faculty</u>				
TIAA	\$121,375.88	\$ 8,748.16		\$130,124.04
Social Security	24,612.91	3,484.08		28,096.99
Medical Plan	11,670.00	675.00		12,345.00
Disability Insurance	4,806.80			4,806.80
Tuition Grants	12,726.01			12,726.01
Moving Expenses	5,915.99			5,915.99
House Allowances	5,400.00			5,400.00
<u>Non-Faculty</u>				
TIAA	44,466.08			44,466.08
Social Security	35,103.93			35,103.93
Medical Plan	6,718.15			6,718.15
Tuition Grants	4,146.14			4,146.14
Pensions	26,948.55			26,948.55
Disability Insurance	643.83			643.83
House Allowances	1,200.00			1,200.00
<u>Total Staff Benefits</u>	<u>\$305,734.27</u>	<u>\$ 12,907.24</u>		<u>\$318,641.51</u>
B-3. <u>General Institutional Expenses</u>				
Alumni Association	\$ 5,049.42	\$		\$ 5,049.42
Alumni Office	25,517.32			25,517.32
Public Relations Office	34,315.42			34,315.42
Commencement and Parents Day	14,725.76			14,725.76
Printing	39,992.86			39,992.86
Subscriptions and Memberships	10,259.53			10,259.53
Mail and Switchboard Service	25,500.65			25,500.65
Insurance (General)	9,205.53			9,205.53
Travel	812.30			812.30
Speakers	1,416.19	96,627.35		98,043.54
Entertainment	7,130.78			7,130.78
Addressograph Room	5,463.28			5,463.28
Visiting Committee	2,426.77			2,426.77
Other Expenses	-	9,848.62		9,848.62
<u>Total General Institutional Expenses</u>	<u>\$181,815.81</u>	<u>\$106,475.97</u>		<u>\$288,291.78</u>
<u>Total General Expenses</u>	<u>\$728,892.61</u>	<u>\$120,783.21</u>		<u>\$849,675.82</u>

HAVERFORD COLLEGE
DETAILED REPORT OF COLLEGE

<u>Statement of Expenditures</u>		30 June 1970		
	<u>Unrestricted</u>	<u>Restricted</u>	<u>Total</u>	
C. <u>Instruction</u>				
Salaries	\$ 847,439.80	\$146,011.60	\$	993,451.40
Supplies and Services	79,630.41	24,774.65		104,405.06
Faculty Secretaries	41,505.10			41,505.10
Telephone and Telegraph	11,446.80	30.75		11,477.55
New Programs	4,955.06			4,955.06
Ford Program in the Humanities	16,100.15	16,102.15		32,202.30
<u>Total Instruction</u>	<u>\$1,001,077.32</u>	<u>\$186,919.15</u>	<u>\$</u>	<u>\$1,187,996.47</u>
D. <u>Organized Activities</u>				
Computer Center	\$ 63,439.14	\$ 9,933.00	\$	73,372.14
Language Laboratory	159.99			159.99
<u>Total Organized Activities</u>	<u>\$ 63,599.13</u>	<u>\$ 9,933.00</u>	<u>\$</u>	<u>73,532.13</u>
E. <u>Sponsored Research</u>				
General	\$	\$ 25,414.93	\$	25,414.93
African Studies		1,437.41		1,437.41
Biology		131,115.68		131,115.68
Chemistry		60,582.36		60,582.36
Economics		12,533.77		12,533.77
Astronomy		32,625.99		32,625.99
Psychology		23,323.07		23,323.07
Physics		55,303.54		55,303.54
Political Science		33,578.06		33,578.06
Mathematics		3,700.00		3,700.00
Sociology		125,924.64		125,924.64
Faculty Research	5,000.00	40,202.26		45,202.26
<u>Total Sponsored Research</u>	<u>\$ 5,000.00</u>	<u>\$545,741.71</u>	<u>\$</u>	<u>550,741.71</u>
F. <u>Libraries</u>				
Salaries	\$ 150,530.58	\$ 8,649.04	\$	159,179.62
Operating Expenses	15,316.25	882.31		16,198.56
Book Binding & Periodicals	9,280.91	89,155.00		98,435.91
<u>Total Libraries</u>	<u>\$ 175,127.74</u>	<u>\$ 98,686.35</u>	<u>\$</u>	<u>273,814.09</u>
G. <u>Maintenance and Operation</u>				
G1. <u>Plant</u>				
Supervision	\$ 59,328.65	\$	\$	59,328.65
Janitorial Services	81,203.50			81,203.50
Repairs to Buildings	155,155.99			155,155.99
Equipment	2,985.86			2,985.86
Water, Heat, Light Power	65,231.84			65,231.84
Grounds	91,751.95	2,782.95		94,534.90
Watchmen	64,805.35			64,805.35
<u>Total Plant</u>	<u>\$ 520,463.14</u>	<u>\$ 2,782.95</u>	<u>\$</u>	<u>523,246.09</u>
G2. <u>General</u>				
Property Insurance	\$ 13,412.01	\$	\$	13,412.01
Auto Service	15,176.84			15,176.84
Social Security	15,995.89			15,995.89
Medical Plan	4,727.14			4,727.14
<u>Total General</u>	<u>\$ 49,311.88</u>	<u>\$</u>	<u>\$</u>	<u>49,311.88</u>
<u>Total Maintenance and Operations</u>	<u>\$ 569,775.02</u>	<u>\$ 2,782.95</u>	<u>\$</u>	<u>572,557.97</u>
<u>Total Educational & General Administration</u>	<u>\$2,851,290.97</u>	<u>\$1,034,384.22</u>	<u>\$</u>	<u>\$3,885,675.19</u>

HAVERFORD COLLEGE
DETAILED REPORT OF COLLEGE

Statement of Expenditures

30 June 1970

	<u>Unrestricted</u>	<u>Restricted</u>	<u>Total</u>
11. <u>Auxiliary Enterprises</u>			
Athletics	\$105,696.66	\$534.33	\$106,230.99
Dormitories	140,484.68		140,484.68
Dining Room	335,706.26		335,706.26
Faculty Housing	90,250.04		90,250.04
Infirmary	39,411.23		39,411.23
Bookstore	132,726.78		132,726.78
Coop	1,485.53		1,485.53
Serendipity Day Camp	6,000.00		6,000.00
<u>Total Auxiliary Enterprises</u>	<u>\$851,761.18</u>	<u>\$534.33</u>	<u>\$852,295.51</u>
111. <u>Student Aid</u>			
Scholarships	\$ 27,553.60	\$337,723.01	\$365,276.61
Fellowship	6,000.00	4,426.00	10,426.00
Employment	30,263.17	25,908.07	56,171.24
Prizes		1,280.00	1,280.00
Post Baccalaureate Program		196,726.42	196,726.42
<u>Total Student Aid</u>	<u>\$ 63,816.77</u>	<u>\$566,063.50</u>	<u>\$629,880.27</u>
<u>Total Expenditures</u>	<u>\$3,766,868.92</u>	<u>\$1,600,982.05</u>	<u>\$5,367,880.97</u>

REPORT ON CONSOLIDATED FUNDS

PRINCIPAL

Units @26.17 6/30/70	Book Value 6/30/70	<u>FUNDS FOR GENERAL PURPOSES</u>		Balance 7/1/69	INCOME		Balance 6/30/70
					Net Income	Expended	
10,195	\$ 158,527.38	General Endowment Fund		\$ 367.25	\$ 13,218.23	\$ 13,403.68	\$ 181.80
841	10,640.09	John M. Whitall Fund			1,132.56	1,132.56	
2,614	44,806.59	David Scull Fund			3,520.23	3,520.23	
1,018	11,364.35	Edward L. Scull Fund			1,370.92	1,370.92	
528	5,144.24	Wistar Morris Memorial Fund			711.05	711.05	
861	10,781.94	Israel Franklin Whitall Fund			1,159.49	1,159.49	
113,501	1,301,375.34	Jacob P. Jones Endowment Fund			152,849.76	152,849.76	
20,292	275,899.76	John Farnum Brown Fund			27,326.87	27,326.87	
891	21,493.67	Clementine Cope Endowment Fund			1,199.90	1,199.90	
4,144	42,394.72	Joseph E. Gillingham Fund			5,580.65	5,580.65	
916	9,160.24	Elizabeth H. Farnum Fund			1,233.56	1,233.56	
3,316	45,035.96	James R. Magee Fund			4,465.60	4,465.60	
156	1,500.00	Albert K. Smiley Fund			210.09	210.09	
3,492	39,515.48	Hinchman Astronomical Fund			4,702.62	4,702.62	
17,222	174,560.31	Walter D. and Edith M.L. Scull Fund			23,192.56	23,192.56	
3,249	26,771.00	Albin Garrett Memorial Fund			4,375.37	4,375.37	
1,455	24,381.59	Arnold Chase Scattergood Memorial Fund			1,959.42	1,959.42	
11,190	125,569.51	Francis B. Gummere Memorial Fund			15,069.37	15,069.37	

18,173	218,728.43	Isaac Sharpless Memorial Fund	24,473.25	24,473.25
11,932	126,076.83	General Education Board Fund	16,068.61	16,068.61
9,124	102,067.43	William Penn Foundation	12,287.13	12,287.13
1,403	14,125.79	Walter Carroll Brinton Memorial Fund	1,889.40	1,889.40
2,373	41,928.94	Corporation Fund	3,195.68	3,195.68
78	10,000.00	Elizabeth J. Shortridge Fund	105.04	105.04
409	5,527.31	Howard Comfort Memorial Fund	550.80	550.80
6,876	67,520.19	Ellen W. Longstreth Fund	9,259.79	9,259.79
505	5,150.00	Albert L. Baily Fund	680.08	680.08
463	4,950.00	Elizabeth B. Wistar Warner Fund	623.52	623.52
22,372	280,764.31	T. Allen Hilles Bequest	30,127.97	30,127.97
557	7,000.00	Leonard L. Greif, Jr. and Roger L. Greif Fund	750.10	750.10
265	2,500.00	Edward M. Wistar Fund	356.87	356.87
87,568	1,429,792.09	Morris Leeds Fund	117,926.25	117,926.25
831	12,000.00	J. Henry Scattergood Fund	1,119.10	1,119.10
8,865	103,993.26	Parker S. Williams Fund	11,938.34	11,938.34
428	6,581.02	Gilbert C. Fry Fund	576.38	576.38
213	2,500.00	Daniel B. Boyer Fund	286.85	286.85
863	10,000.00	Marriott C. Morris Fund	1,162.19	1,162.19
13,677	210,427.63	1949 Campaign Salary Fund	18,324.30	18,324.30
26,970	406,170.69	Rufus M. Jones Fd. for Adv. of Teaching	36,134.17	36,134.17
2,300	36,178.02	William B. Bell Fund	3,097.37	3,097.37
1,700	25,068.15	Dr. Thomas Wistar Fund	2,289.36	2,289.36
		Forward		

REPORT OF CONSOLIDATED FUNDS - Continued*						
Units @26.17 6/30/70	Book Value 6/30/70		Balance 7/1/69	Net Income	Expended	Balance 6/30/70
2,600	37,187.20	Charles McCaul Fund	21.78	3,501.38	3,500.00	23.16
351	5,000.00	Isaac and Lydia Cope Sharpless Fund		472.69	472.69	
230	4,500.00	Class of 1937 Fund		309.74	309.74	
6,394	132,321.74	J. Horace Cook Fund	-82.40	37,149.74	37,054.33	13.01
17,206	345,000.00	Ford Foundation Endowment Fund		23,171.01	23,171.01	
3,785	75,801.94	Ford Foundation Accomplishment Fund		5,097.19	5,097.19	
629	12,426.18	Thomas Harvey Haines & Helen Hague Haines Fund		847.07	847.07	
489	10,000.00	Emily Bishop Harvey Fund		658.53	658.53	
417	8,932.50	Class of 1933-25th Anniversary Fund		561.57	561.57	
1,539	35,828.17	John E. Hume Fund		2,072.55	2,072.55	
430	10,000.00	Frederick H. Strawbridge Fund		579.07	579.07	
8,044	185,110.15	William H. Collins Fund		10,832.71	10,832.71	
1,089	25,000.00	Mary Frances Nunns Fund	-1.34	1,466.54	1,400.00	65.20
3,066	78,342.56	Eli Nichols Fund		4,128.93	4,128.93	
978	25,000.00	William Gibbons Rhoads Fund	324.82	1,317.06	1,409.65	232.23
224	6,084.81	Class of 1911-50th Anniversary Fund		301.66	301.66	
270	7,275.67	Class of 1935-25th Anniversary Fund		363.61	363.61	
1,034	28,710.81	Class of 1937-25th Anniversary Fund		1,392.47	1,392.47	
868	25,148.45	Allen C. Thomas Fund		1,168.92	1,168.92	
730	21,147.97	Charles E. Gause Fund		983.08	983.08	
250	7,662.75	Class of 1918-50th Anniversary Fund		336.67	336.67	

1,535	45,808.12	Class of 1943 Fund	2,011.42	2,011.42
8,333	250,000.00	C. Mahlon Kline Memorial Fund	11,221.90	11,221.90
		Thomas B. Harvey Fund	575.10	575.10
	5,000.00	Karl G. and Elason Kumm Fund	37.50	37.50
<u>474,317</u>	<u>\$6,845,261.28</u>			
		<u>FUNDS FOR WISTAR BROWN GRADUATE SCHOOL</u>		
			\$630.11	\$667,058.91
				\$667,136.12
				<u>\$552.90</u>
29,948	\$422,119.91	Moses Brown Fund	\$40,124.39	\$40,124.39
		<u>FUNDS FOR MORRIS INFIRMARY</u>		
920	9,653.44	Infirmary Endowment Fund	1,238.95	1,238.95
501	5,059.50	John W. Pinkham Fund	674.69	674.69
<u>1,421</u>	<u>\$14,712.94</u>		\$1,913.64	\$1,913.64
		<u>FUNDS FOR HAVERFORD UNION</u>		
108	\$1,878.82	Haverford Union Fund	\$145.44	\$145.44
		<u>FUNDS FOR SCHOLARSHIPS</u>		
512	5,257.82	Thomas P. Cope Fund	689.50	350.00
			-315.97	23.53
		Forward		

REPORT OF CONSOLIDATED FUNDS - CONTINUED*

			Balance 7/1/69	Net Income	Expended	Balance 6/30/70
492	6,069.23	Edward Yarnall Fund	31.01	662.57	700.00	-6.42
1,187	19,817.40	Isaiah V. Williamson Fund	66.67	1,598.51	1,600.00	65.18
541	5,056.25	Richard T. Jones Scholarship Fund	4.64	728.56	700.00	33.20
568	7,013.61	Mary M. Johnson Scholarship Fund	27.71	764.92	750.00	42.63
709	7,919.76	Sarah Marshall Scholarship Fund	42.92	954.80	950.00	47.72
1,532	22,845.86	Clementine Cope Fellowship Fund	5,924.32	2,063.12	3,526.00	4,461.44
473	10,329.35	Isaac Thorne Johnson Scholarship Fund		635.64	635.64	
755	11,662.39	Caspar Wistar Memorial Scholarship Fund	37.85	1,016.75	1,000.00	54.60
529	5,155.85	J. Kennedy Moorhouse Scholarship Fund	25.02	712.40	700.00	37.42
1,282	19,826.13	Louis Jaquette Palmer Scholarship Fund	59.24	1,715.33	1,600.00	174.57
417	5,045.60	Paul W. Newhall Memorial Scholarship Fund	-6.63	561.57	550.00	4.94
2,174	22,250.00	Robert Martin Zuckert Memorial Sch. Fund	7.30	2,927.69	2,850.00	84.99
359	5,017.31	Samuel E. Hilles Scholarship Fund	-127.70	483.46	350.00	5.76
300	3,000.00	Class of 1913 Scholarship Fund	80.10	404.00	450.00	34.10
890	11,200.00	Class of 1917 Scholarship Fund	7.81	1,198.55	1,150.00	56.36
744	10,000.00	Daniel B. Smith Fund	29.88	1,001.93	1,000.00	31.81
7,553	75,534.58	Sarah Tatum Hilles Memorial Scholarship Fund	117.56	10,171.49	10,250.00	39.05
3,923	52,325.01	Elihu Grant Memorial Scholarship Fund	3.61	5,283.04	5,100.00	186.65
1,581	17,050.00	Christian Febiger Memorial Scholarship Fund	38.78	2,129.11	2,100.00	67.89
500	5,000.00	Joseph L. Markley Memorial Scholarship Fund	4.39	673.34	650.00	27.73
2 506	30,000.00	Joseph C. & Anne N. Birdsall Scholarship Fund	8.35	3,374.79	3,250.00	133.14

255	3,000.00	Daniel E. Davis, Jr. Memorial Scholarship Fund	-8.26	343.41	300.00	35.15
1,216	20,000.00	Jonathan E. Steere Scholarship Fund	3.71	1,637.57	1,600.00	41.28
1,190	15,000.00	William Graham Tyler Memorial Scholarship Fund	36.33	1,602.55	1,550.00	88.88
298	5,300.00	1890 Memorial Scholarship Fund	2.33	401.31	375.00	28.64
3,528	53,578.93	1949 Campaign Scholarship Fund	-428.68	4,726.86	4,622.69	-324.51
1,062	17,433.01	Max Leuchter Scholarship Fund		1,426.14	1,426.14	
1,550	25,000.00	A. Clement Wild Scholarship Fund	22.35	2,087.36	2,000.00	109.71
423	6,245.11	Caroline Chase Scholarship Fund	15.46	569.65	550.00	35.11
351	5,000.00	Roy Thurlby Griffith Memorial Fund	-7.07	472.69	450.00	15.62
509	10,000.00	Class of 1904 Scholarship Fund	36.91	685.46	700.00	22.37
491	10,000.00	Inazo Nitobe Scholarship Fund	10.69	661.22	650.00	21.91
555	14,000.00	Summerfield Foundation Scholarship Fund	28.04	747.41	700.00	75.45
629	12,575.00	W. LaCoste Neilson Scholarship Fund	66.34	847.07	900.00	13.41
86	2,000.00	Rufus Matthew Jones Scholarship Fund	507.94	115.82	600.00	23.76
532	12,800.00	Clinton P. Knight, Jr. New England Sch. Fund	41.14	716.44	700.00	57.58
439	10,000.00	The F of x Scholarship Fund	43.08	591.20	600.00	34.28
887	25,175.00	M. A. Ajzenberg Scholarship Fund	68.98	1,194.51	1,200.00	63.49
266	7,257.00	Class of 1912 Scholarship Fund	3.87	358.22	350.00	12.09
633	17,229.19	Class of 1936 Scholarship Fund	53.12	852.45	850.00	55.57
528	14,967.13	Archibald MacIntosh Scholarship Fund	62.93	687.69	700.00	50.62
427	12,500.00	Reader's Digest Foundation Endowed Sch. Fund	-6.90	575.04	450.00	118.14
7,799	228,437.50	Jose Padin Puerto Rican Scholarship Fund	11,813.69	10,502.78	8,696.21	13,620.26

Forward

REPORT OF CONSOLIDATED FUNDS - Continued*

		Balance 7/1/69	Net Income	Expended	Balance 6/30/70
1,819	55,559.63	Howard M. Cooper Scholarship Fund	365.88	2,449.62	2,750.00
854	26,093.83	Alphonse N. Bertrand Scholarship Fund	43.58	1,150.07	1,150.00
	50,000.00	George F. Baker Scholarship Fund	-6,736.66	2,000.00	17,066.80
701	21,046.11	Hughes Scholarship Fund	111.84	944.03	1,000.00
1,337	35,000.00	William Henry Chamberlin Scholarship Fund		816.62	1,000.00
	<u>\$1,072,573.59</u>		<u>\$12,217.50</u>	<u>\$78,914.26</u>	<u>\$93,148.48</u>
57,892					<u>-2,016.72</u>

FUNDS FOR THE LIBRARY

1,554	27,435.06	Alumni Library Fund		2,092.75	2,092.75
5,278	71,462.26	Mary Farnum Brown Library Fund		7,107.79	7,107.79
93	5,000.00	William H. Jenks Library Fund	21.90	125.25	120.00
1,674	20,306.74	Mary Wistar Brown William Library Fund	1,946.06	2,254.35	1,402.00
16,696	173,078.14	Anna Yarnall Fund		22,484.21	22,484.21
60	635.47	F. B. Gummere Library Fund	181.34	80.80	262.14
100	1,002.34	Edmund Morris Fergusson, Jr. Memorial Fund	375.36	134.67	510.03
655	6,550.00	Class of 1888 Library Fund	1,666.69	882.08	427.00
125	1,253.52	Class of 1918 Library Fund	234.73	168.34	314.00
60	600.00	Quakeriana Fund	79.74	80.80	153.00
129	1,500.00	Mohonk Fund for Rufus M. Jones Coll. Myst.	257.50	173.72	437.00
431	5,000.00	Rufus M. Jones Book Fund	3,492.91	580.42	1,337.00
2,631	39,759.71	1949 Campaign Library Fund	4,835.51	3,525.62	5,666.66
					2,736.33
					2,736.33

96	2,336.47	Class of 1909 R. M. Jones Mem'l Library Fund	72.78	129.28	200.00	2.06
87	2,335.00	Rayner W. Kelsey Fund	160.84	85.99	192.00	54.83
515	13,640.96	Sara & Francis Pawling Library Fund	1,837.90	693.54	199.50	2,331.94
2,412	70,600.00	Joseph R. Grundy Library Fund	-1,391.64	3,248.20	1,800.00	56.56
77	2,317.13	Carlisle & Barbara K. Moore Fund	231.71	103.70	300.00	35.41
32,673	\$444,812.80		\$14,003.33	\$43,951.51	\$44,228.81	\$13,726.03

FUNDS FOR OLD STYLE PENSIONS

3,804	41,237.08	President Sharpless Fund	5,122.78	5,122.78		
3,712	36,758.66	William P. Henszey Fund	4,998.89	4,998.89		
4,928	68,113.78	Jacob P. Jones Benefit Fund	6,636.45	6,636.45		
312	3,272.24	Pliny Earle Chase Memorial Fund	420.17	420.17		
5,784	64,472.93	Haverford College Pension Fund	8,341.35	8,341.35		
18,540	\$213,854.69		\$25,519.64	\$25,519.64		

FUNDS FOR SPECIAL PURPOSES

524	5,248.00	Thomas Shipley Fund	1,162.05	705.66	1,737.47	130.24
24	1,126.75	Elliston P. Morris Fund	-536.15	32.32	95.00	-598.83
309	4,197.87	John B. Garrett Reading Prize Fund	2,113.63	416.13	150.00	2,379.76
632	9,227.07	Special Endowment Fund		851.11	851.11	
240	2,296.88	Scholarship Improvement Prize Fund.	2,376.06	323.21		2,699.27
173	1,727.00	Elizabeth P. Smith Fund	1,931.07	232.98	600.00	1,564.05

Forward

REPORT OF CONSOLIDATED FUNDS - Continued*

			Balance 7/1/69	Net Income	Expended	Balance 6/30/70
270	2,546.88	S. P. Lippincott History Prize Fund	329.34	363.61	431.00	261.95
512	5,120.30	Francis Stokes Fund	871.30	689.50	1,440.00	120.80
514	8,850.49	George Peirce Prize Fund		661.22	661.22	
221	2,155.00	Lyman Beecher Hall Prize Fund	2,229.13	297.62	100.00	2,426.75
294	1,397.75	Newton Prize Fund	1,248.14	395.93	95.00	1,549.07
195	2,400.00	Edward B. Conklin Athletic Fund		262.60	262.60	
1,036	14,362.75	Edward Woolman Arboretum Fund	342.88	1,395.16		1,738.04
200	2,000.00	William Ellis Scull Prize Fund	2,855.51	269.34	50.00	3,074.85
100	1,000.00	Paul D. I. Maier Fund		134.67	134.67	
383	3,839.54	Strawbridge Observatory Maintenance Fund	-1,630.12	515.78		-1,114.34
677	10,565.10	Jacob & Eugenie Bucky Memorial Foundation		889.39	889.39	
189	3,064.04	Mathematics Department Prize Fund		242.40	242.40	
249	2,491.50	William T. Elkinton Fund	73.75	335.33		409.08
638	7,000.00	Tilney Memorial Fund	1,710.11	859.18	1,777.33	791.96
14	142.90	Class of 1902 Latin Prize Fund	85.63	18.85	10.00	94.48
534	6,315.00	Class of 1898 Gift	37.70	719.13	650.00	106.83
85	1,006.50	Edmund J. Lee Memorial Award Fund	701.93	114.47		816.40
95	2,189.70	David R. Bowen Premedical Fund	797.75	125.89	53.00	870.64
996	15,043.62	Jonathan & Rachel Cope Evans Fund	7.35	1,341.30	1,341.30	7.35
102	1,457.44	Edward Hawkins Memorial Fund	416.88	137.36		554.24
30	500.00	William W. Baker Prize Fund	156.88	40.40	40.00	157.28
12	300.00	John G. Wallace Award Fund	-32.59	16.16		-16.43

195	4,000.00	Christian Religion & Thought Fund	363.83	262.60	160.10	466.33
120	2,784.38	The Kurzman Prize Fund	106.92	161.60	125.00	143.52
3,618	95,420.70	The Scholars in the Humanities Fund	457.87	4,872.30	5,786.71	-456.54
1,850	53,755.37	Fund for the Dev. of the Natural Beauty of Haverford Campus	2,695.68	2,491.36	2,695.68	2,491.36
144	4,291.96	The Class of 1964 Faculty Salary Fund	714.44	193.92	908.36	
173	5,005.00	Henry S. Drinker Music Fund	977.69	232.98		1,210.67
819	23,584.60	Electronics Research Fund	3,748.05	1,102.93	4,850.98	
	37,000.00	Old Dominion Foundation Fellowship in the Humanities Fund		1,480.00	1,480.00	
18	550.00	Ada Steffen Wright Memorial Cup	2,102.91	24.24		2,127.15
362	10,870.63	The Asby Fund		487.50		487.50
	5,200.00	Athletics Facilities Fund		200.00	200.00	
955	25,000.00	The Lincoln Foundation for the Humanities		750.00	3,233.70	-2,483.70
1,563	40,912.50	Lydia B. Stokes Faculty Fund		1,205.75	1,205.75	
205	5,377.63	The Albert Harris Wilson Award Fund		143.36		143.36
19,270	<u>\$431,324.85</u>		<u>\$28,415.62</u>	<u>\$25,995.24</u>	<u>\$32,257.77</u>	<u>\$22,153.09</u>

REPORT ON NON-CONSOLIDATED FUNDS

PRINCIPAL	Book Value 6/30/70	INCOME			Balance 6/30/70
		Balance 7/1/69	Net Income	Expended	
John Farnum Memorial Fund	\$ 35,163.79	\$	\$ 2,061.50	\$ 2,061.50	\$
Anonymous Trust	318,207.40	-1,227.42	17,479.00	16,104.00	147.58
Nathan Branson Hill Trust			261.65	261.65	
W. Percy Simpson Trust			3,839.61	3,839.61	
Philip B. & Louise S. Deane Fund	30,603.32		1,444.68	1,444.68	
D. Robert Yarnall Trust			2,036.32	2,036.32	
T. Kite Sharpless Fund	1,298,725.22				
James P. & Ruth Marshall Magill Trust	1,024,875.00		40,500.00	40,500.00	
August Taber Murray Research Sch. Fund	34,040.09	2,700.00	1,651.60	1,651.60	2,700.00
Walter R. Faries Scholarship Fund	85,868.27	167.04	3,909.48	3,307.98	768.54
Herman K. Stein Scholarships	39,204.00		900.24	900.24	
William Pyle Phillips Fund) General	5,102,189.09		115,168.68	115,168.68	
) Special		116,285.38	115,168.67	168,731.38	62,722.67
		\$117,925.00	\$304,421.43	\$356,007.64	\$66,338.79

SUMMARY OF CONSOLIDATED AND NON-CONSOLIDATED FUNDS

	<u>Book Value 7/1/69</u>	<u>Increase</u>	<u>Decrease</u>	<u>Book Value 6/30/70</u>	<u>Net Income</u>
Funds for General Purposes	\$ 6,805,217.10	\$ 40,044.18	\$	\$ 6,845,261.28	\$ 667,058.91
Funds for T. Wistar Brown Graduate School	418,107.47	4,012.44		422,119.91	40,124.39
Funds for Morris Infirmary	14,712.94			14,712.94	1,913.64
Funds for Haverford Union	1,878.82			1,878.82	145.44
Funds for Scholarships	1,035,254.12	37,319.47		1,072,573.59	78,914.26
Funds for Library	443,450.54	1,362.26		444,812.80	43,951.51
Funds for Old Style Pensions	218,422.09		4,567.40	213,854.69	25,519.64
Funds for Special Purposes	398,241.71	78,083.14	45,000.00	431,324.85	25,995.24
Gains	6,358,054.44	637,660.14	7,731.80	6,987,982.78	
Total Consolidated Funds	\$15,693,339.23	\$798,481.63	\$57,299.20	\$16,434,521.66	\$883,623.03
Total Non-Consolidated Funds	7,729,767.11	239,383.85	274.78	7,968,876.18	304,421.43
Total Funds	<u>\$23,423,106.34</u>	<u>\$1,037,865.48</u>	<u>\$57,573.98</u>	<u>\$24,403,397.84</u>	<u>\$1,188,044.46</u>

NOTE: Funds having a book value of \$318,207.00 have been designated for unfunded construction when principal is available.

The Book Value increased \$1,037,865.48 as follows:

Additions to Funds	\$ 148,366.71
Income transferred to principal	13,206.38
Net gains on securities sold or called:	
Consolidated Investments	637,660.14
Wm. Pyle Philips Investments	238,632.25
Net increases in Consolidated and Non-Consolidated Funds	<u>\$1,037,865.48</u>

CLASSIFICATION OF INVESTMENTS

JUNE 30, 1970

CONSOLIDATED ACCOUNT

NON-CONSOLIDATED ACCOUNT

<u>BONDS</u>	<u>BOOK VALUE</u>	<u>TOTAL</u>	<u>MARKET VALUE</u>		<u>BOOK VALUE</u>	<u>TOTAL</u>	<u>MARKET VALUE</u>	<u>TOTAL</u>
Municipal	\$ -0-		\$	\$	85,791.45		\$	57,804
U.S. Government	100,000.00				-0-			-0-
Industrial	1,352,599.07		\$		79,000			461,570
Public Utility	1,017,288.10			1,012,970	575,786.69			284,480
Transportation	277,540.14			711,531	361,884.74			106,143
Foreign	1,334,046.75			229,000	226,234.21			284,965
Financial	1,198,392.50			1,011,360	379,625.00			327,900
		5,279,866.56		913,825	404,563.00	2,033,885.09		1,522,862
<u>PREFERRED STOCK</u>								
Industrial	462,597.14			229,213	1,253,457.70			716,625
Public Utility	61,616.60			40,200	-0-			-0-
		524,213.74				1,253,457.70		716,625
<u>COMMON STOCK</u>								
Financial	547,846.54			822,485	778,983.64			697,690
Industrial	1,501,606.80			2,647,214	2,777,395.84			1,901,307
Public Utility	1,067,245.21			1,536,669	968,880.47			799,448
Transportation	207,136.17			91,000	-0-			-0-
Miscellaneous	41,400.00			17,650	-0-			-0-
		3,365,234.72				4,519,259.95		3,398,445
<u>MORTGAGES</u>								
		375,525.08		375,525				
<u>COLLEGE REAL ESTATE</u>								
		1,139,528.09		1,139,528				
<u>MISCELLANEOUS</u>								
		284,341.03		284,341				
<u>CASH AND ADVANCES TO CURRENT FUNDS</u>								
		\$5,465,812.44		5,465,812				162,274
		\$16,434,521.66		\$16,607,323				\$5,800,206

NOTE: There is also held \$56,614.06 in financial stock not included in the above figures, being the holdings in C. WHARTON STORK ART GIFT FUND which is not included in the funds. This fund has an overdraft in principal cash of \$33,414.06.

ADDITIONS TO FUNDS

1969 - 1970

GENERAL ENDOWMENT

From: C. Reed Cary Trust	12,711.98	
Thomas Evans Trust	13,220.85	
David H. Harper Legacy	<u>1,000.00</u>	\$ 26,932.83

CLASS OF 1943 FUND

From: Various donors		1,808.75
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KARL G. AND ELASON KUMM FUND

From: Karl G. Kumm (life interest)		5,000.00
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LOUIS JAQUETTE PALMER SCHOLARSHIP FUND

From: Triangle Society		1,035.00
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ARCHIBALD MACINTOSH SCHOLARSHIP FUND

From: Robert G. Wilson Fdn.		700.00
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THE WILLIAM HENRY CHAMBERLIN SCHOLARSHIP FUND

From: Legacy of William Henry Chamberlin		35,000.00
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RAYNER W. KELSEY FUND

From R. Wilfred Kelsey		1,000.00
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JACOB & EUGENIE BUCKY MEMORIAL FOUNDATION

From: Foundation (through Robert C. Thomson)		500.00
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DAVID R. BOWEN PREMEDICAL FUND

From: Lewis H. Bowen		100.00
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ATHLETICS FACILITIES FUND

From: Cletus Oakley		5,000.00
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THE LINCOLN FOUNDATION FUND FOR THE HUMANITIES

From: J.F. Lincoln Fdn. Family Fund		25,000.00
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LYDIA B. STOKES FACULTY FUND

From: Lydia B. Stokes	30,912.50	
Dr. S. Emlen Stokes	<u>10,000.00</u>	40,912.50

THE ALBERT HARRIS WILSON AWARD FUND

From: Class of 1919-50th Re-union		<u>5,377.63</u>
		<u>\$148,356.71</u>

PRICE WATERHOUSE & CO.

INDEPENDENCE MALL WEST

PHILADELPHIA 19106

October 14, 1970

Board of Managers

The Corporation of Haverford College

In our opinion, the accompanying statement of cash transactions and book value of the William Maul Measey Trust presents fairly, on a basis consistent with that of the preceding year, the income and principal transactions of the Trust for the year ended June 30, 1970 and cash balances and book value at that date in accordance with the provisions of the Trust agreement. Our examination of this statement was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances including confirmation of cash and securities by correspondence with the depository.

Price Waterhouse & Co.

WILLIAM MAUL MEASEY TRUST

Statement of Cash Transactions and Book Value

For the Year Ended June 30, 1970

Book value of Trust at July 1, 1969	\$2,068,286.02
Realized capital gains	<u>119,087.46</u>
Book value of Trust at June 30, 1970	
including principal cash	<u>\$2,187,373.48</u>
Market value of Trust at June 30, 1970	
	<u>\$2,791,719.00</u>

Cash Statement of Receipts and Expenditures

Principal

Cash balance July 1, 1969	\$ 7,587.52
Investments realized	<u>322,432.40</u>
	<u>\$ 330,019.92</u>
Investments made	\$ 321,148.14
Cash balance June 30, 1970	<u>8,871.78</u>
	<u>\$ 330,019.92</u>

Income

Cash balance July 1, 1969 representing prior year income and reserve	\$ 131,775.53
Disbursements in year	
To Haverford College for administration of Trust	\$13,007.76
To Haverford College for aid to 83 students	65,038.80
To secondary schools for aid to 74 students	<u>44,000.00</u>
	<u>122,046.56</u>
	9,728.97
Current year income	
Income from investments July 1, 1969 to June 30, 1970	130,640.75
Interest earned from savings fund account	<u>657.61</u>
	<u>131,298.36</u>
Cash balance June 30, 1970	<u>\$ 141,027.33</u>

In order that the income available from the Trust for aid to students may be known at the beginning of each fiscal year, such income is accumulated and not awarded nor disbursed until the following year.

*Haverford
College*

Business Office

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D. P. ARTHUR



G. A. BAGG



C. H. BANKS



P. M. BARRY



S. M. BARST



G. A. BARTH



P. W. BAUER



C. G. BEEVER



R. B. BEGLEY



N. R. BELL



P. E. BERRY



A. R. BLOCK



P. D. BLUDMAN



E. BOONER



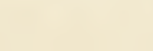
P. M. BOWERS



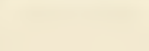
E. S. BOYER



W. D. BRAMSON



D. BRENNER



J. D. BROWN

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N. BROWN



D. I. BRUCE



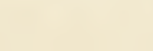
W. E. BUCHANAN



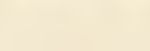
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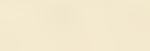
G. W. CHAPMAN



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P. DENIG



S. V. DESIDERIO



J. T. DONOHOE



G. P. DUNN



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L. S. EARLEY



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J. C. ECK



R. D. EHLERS



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S. G. EMERSON



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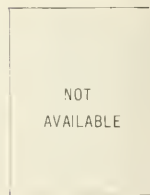
C. F. PROCOPIO



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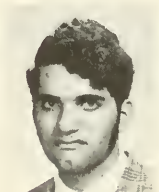
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R. L. EASTON, JR.



D. L. EMANUEL



G. A. EMMETT



K. D. FARSHTEY



NOT
AVAILABLE

J. J. FAUST



J. L. FEIN



D. E. FINLEY



E. W. FITZ



J. J. FLUCK



C. I. FREEDMAN



D. R. FRIED



D. E. GANN



B. S. GARTON



NOT
AVAILABLE

D. W. GASKILL



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R. S. MC KEE



K. S. MC MURTREY



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D. C. SIMMONS



S. G. SIPPLE



D. J. SLOANE



J. H. SMALHOUT



C. R. SMITH



R. G. SMITH



C. STEENBERGEN, JR.



J. R. STOLL



K. D. SUGARMAN



J. D. SWEET



E. J. SZEWCZAK



P. C. TAYLOR



D. B. THOMAS



O. A. TRAINER



J. L. TREAT



P. J. URQUHART, III



P. C. URSELL



W. G. WAGNER

CLASS OF 1972



A. Z. F. WANG



N. E. WARRES



K. E. WEAVER



R. I. WEISBERG



D. C. WENDELL, III



P. D. WHIDDEN



T. R. WILLIAMS, JR.



A. WOLPE



R. T. WRIGHT



M. A. YACKO, JR.



R. D. YAGER



D. E. ZELLE



D. C. ZUMETA

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S. W. BARRY



A. H. BARTELS



S. L. BARTON



S. E. BARTON



S. W. BATZELL



E. G. BECKWITH



D. A. BERG



D. F. BERRY



A. D. BLISTEIN



R. A. BOHRER



NOT
AVAILABLE

E. BONADUCE



D. C. BRASSFIELD



D. R. BRENNER



T. S. BRYSON



A. M. BURKE



D. W. CARTER



E. P. CHESTER



J. A. CHEWNING



T. L. CLOUGH



V. CORONEL-CHAUCA



B. J. CRAIG



J. L. DAVIDSON



J. R. DEKLEWA



J. W. DELANO



D. M. DENTON



S. S. DIAMOND

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R. L. DIRECTOR



A. K. EDELSTON



S. M. EISDORFER



J. ELKINTON



S. ERB



D. M. ESPO



D. W. EVANS



E. N. FALES, II



B. K. FEROE



G. D. FERREE



H. B. FINKEL



J. T. GILL



P. M. GILMER



B. J. GODEREZ



P. D. GOLDBERGER



M. H. GOLDMAN



R. S. GOODMAN



T. L. GOWEN, JR.



R. GREENFIELD



E. K. GRIMMELMANN



W. R. HALL



P. C. HART



W. R. HARVEY



B. W. HASTINGS



J. D. HAYDEN, JR.



C. J. HEATON, JR.



P. J. HERRMANN



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T. M. HOOPES



M. E. HUIBREGTSE

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H. T. HURD



M. R. INVER



H. M. JACOBSON



D. W. JENKINS



D. H. JOHNSON



S. S. JONES



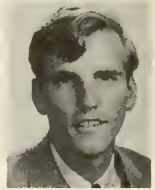
M. KAMARCK



R. A. KIMMICH, JR.



R. E. KOEPPE, II



T. R. KOVARIC



J. S. KROMER



T. A. KUNZ



G. F. LANSON



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M. S. MAC CLAREN



D. S. MAC LEAN



M. MAHON



J. R. MAIER



J. A. MASON



M. K. MC LEMORE



P. M. MELVIN



R. G. MERKLER



R. A. MILLER



S. E. MILLER



L. G. MILLHOFER



P. D. MINDUS



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J. D. MYERS



S. R. NEWCOMB



R. B. NORRIS



S. S. OREFICE



F. M. OVSIEW



J. C. OWENS



J. C. PARKIN



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J. S. POBER



K. M. PRESSMAN



A. J. PRITCHARD



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C. RICHARDSON



B. E. RIDLEY



P. W. RITCHEY



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A. M. ROLFE



D. M. ROSEN



Y. ROSENTHAL



J. A. M. ROTTENBERG



J. RUBENSTEIN



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M. B. SMITH



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T. W. STUDWELL



C. R. TANNENBAUM



B. T. TAYLOR



J. H. TAYLOR



D. L. THOMAS, JR.



M. THOMAS



A. S. TUCKER



S. P. ULAN



G. L. B. WALTON



J. B. WARREN



D. S. WEIGHTMAN



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M. E. WORKMAN



C. WRIGHT, IV



J. S. WYLIE

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M. A. ZABLUDOFF



J. S. ZECHMAN

EXCHANGE STUDENTS 1970-1971



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K. ANDERSEN



S. ANDERSON



S. ARROM



C. BAKER



M. BALLARD



V. BALSHAW



D. BEITSCH



S. BELL



Y. BERLINER



N. BLUMENTHAL



E. BRUNSWICK



L. BURLEIGH



D. CHADWICK



N. CLARK



D. COHN



S. DAVIES



S. DAVIS



J. DECTER



M. DYCK



J. EATON



L. EHLERS



M. FEENEY



M. FIELDS



J. FRIEDMAN



T. FULLER



I. GOGEK



L. GAUIANI



A. GRUNERT



S. HANKWITZ

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R. HENNER



A. HELFGOTT



T. HORN



D. HUDSON



N. IVANHOE



E. IVY



C. JOHNSON



M. KARES



C. KIEGLER



C. KRAUS



D. LEGER



K. LEVINE



M. LEVIS



F. LEVITT



J. LEWIS



A. MALESTER



M. MARTIN



D. MASTERS



M. MATHER



L. MAYER



M. MC REYNOLDS



M. MITNICK



D. PERUN



G. PICKER



H. POLLACK



T. POTTER



K. REETZ



S. ROMAINE



A. ROSENBERG

EXCHANGE STUDENTS 1970—1971



F. ROSSET



B. SAVAN



R. SCHAUFFLER



M. L. SCHENCK



M. SCHULWOLF



C. SEGALI



K. SHERMAN



H. SONDER



C. SOUSSLOFF



H. SPENCER



K. SPEICHER



D. STAUB



E. STEINBERG



R. STRICKLAND



L. SUTERMEISTER



A. THOMFORDE



A. THRO



D. UNGER



A. WEBSTER



J. WINTER



S. WOLF



M. WORKMAN



D. YEAGER

BOARD OF MANAGERS 1970—1971



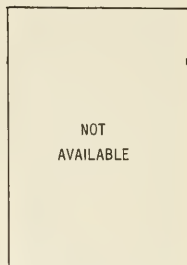
ROBERT L. BALDERSTON



DAVID C. BEVAN



JAMES B. BRADBEER



THOMAS S. BROWN



MAXWELL DANE



THOMAS ELKINTON



WOODRUFF J. EMLEN



J. MORRIS EVANS



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TIMOTHY P. HAWORTH



ARTHUR R. KANE, JR.



DR. JAMES A. KATOWITZ



BERNARD V. LENTZ



WILLIAM MORRIS MAIER

Managers Emeriti

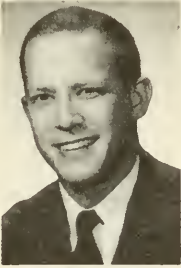
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HAROLD EVANS
HENRY C. EVANS

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JOHN A. SILVER

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DANIEL D. TEST, JR.



MAURICE A. WEBSTER, JR.



JOHN C. WHITEHEAD



RICHARD R. WOOD

FACULTY-STAFF 70-71



W. W. AMBLER



M. ASENSIO



J. ASHMEAD



D. ASWELL



P. ATWOOD



W. F. BALTHASER



E. F. BAUER



T. A. BENHAM



NOT
AVAILABLE

P. G. BENNETT



R. BERNSTEIN



NOT
AVAILABLE

L. BLANKERTZ



E. BRONNER



E. BOGART



NOT
AVAILABLE

M. BRATMAN



R. H. BUTMAN



W. E. CADBURY



NOT
AVAILABLE

C. CAIRNS



S. CARY



J. P. CHESICK



D. CLAY



J. R. COLEMAN



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G. COUCH



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H. DUNATHAN



D. L. ELDER



I. FINGER



D. A. FRASER



A. GANGADEAN



L. GERSTEIN



D. J. GILLIS



NOT
AVAILABLE

M. GLEDHILL



H. GLICKMAN



E. GOLDBERGER



J. GOLLUB



L. GREEN



S. GUBINS



H. GUTWIRTH



NOT
AVAILABLE

N. B. HANNAH



G. E. HANSEN



A. P. HARE



D. H. HEATH



S. HECHT



T. B. HETZEL



W. F. HOHENSTEIN



R. HOUTZ



H. HUNTER



D. HUSEMOLLER



C. HYSLOP



G. KANNERSTEIN



D. KESSLER

FACULTY-STAFF 70-71



L. A. KOSMAN



T. KRAUZE



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W. W. LANDER



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M. LEVIN



A. LEVINE



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J. B. LONG



R. J. LUBARSKY



R. LUMAN



J. W. LYONS



W. MAC GAFFEY



C. MAC KAY



G. MARTIN



P. MC CARTHY



J. W. MC KENNA



B. MIEHE



D. MILLER



Z. MOORE



M. NEISENDORFER



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J. PERIN



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D. QUINN

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F. J. QUINN



E. RALPH



J. K. RANDOLPH



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R. REESE



W. H. REESE



E. S. ROSE



H. L. ROSENZWEIG



P. B. ROWE



P. ROZIN



J. RUSSO



NOT
AVAILABLE

M. SAGOFF



A. SATTERTHWAITE



S. SCHNAARS



W. A. SHAFER



W. SHEPPARD



M. K. SHOWE



S. M. SHUMER



C. W. SMITH



G. SPIEGLER



J. SPIELMAN



C. SPRINGER



C. STARK



C. STEGEMAN



R. E. STIEFEL



S. STOWE



D. SWAN



H. TEAF

FACULTY-STAFF 70-71



S. P. THEOPHILOS



J. THOMPSON



W. J. TRELA



J. L. VAUGHAN



S. R. WALOMAN



P. E. WEHR



J. A. WILLIAMS



C. WINTNER



A. ZABLUDOWSKI



Haverford College

STUDENTS' GUIDE

1970-1971

Published by the Dean of Students
for the students of Haverford College, Haverford, Pa.,
and containing information on the following subjects.

RESIDENCE HALLS

Opening and Closing. Rooms may be occupied from noon on Friday, September 11, until noon on the day after Commencement, except for vacation periods as noted below.

Vacation Residence. Students may occupy their own dormitory rooms without additional cost during Thanksgiving vacation and Intersession. Sections of one or more dormitories will be designated as quarters for those wishing to spend Christmas or spring vacations on campus. Permission of the usual occupant of the room must be obtained, and arrangements must be made in advance at the Dean of Students' Office. There is a fee of \$3.50 per day during these two vacations.

Fees--Room and Board. The room and board fee of \$1,300 is due in two equal installments. The first semester bill must be paid in full by August 25, unless other arrangements have been explicitly made with the Business Office. The second semester bill is due on January 15, 1971.

No refund of room rental is made if a student vacates his room during a semester. If a student vacates his room during the first semester, he will not be liable for a second semester room charge.

Students' Guide 1970-1971

Room Assignments. In the spring students choose rooms for the following year in a room draw giving priority to upperclassmen. A student must receive consent of the Dean of Students to transfer his room assignment. A student permitted to move must return the key of the room vacated and obtain a new key for his new room. A \$2 charge is made for a room change.

Furniture. Furniture and equipment provided by the College must remain in the dormitory room. Following year-end inspection, students will be assessed for missing or damaged equipment and for damage to the room. Personal rugs and furniture must comply with fire and sanitation regulations. Student furniture must be portable and not attached to the walls. Construction of scaffolding and platforms is not permitted.

Keys. Students should have keys for their rooms and should keep their rooms locked for security reasons. Keys are issued by the Buildings and Grounds Office at the beginning of the academic year. A \$2 deposit is required at this time and is refunded when the key is returned. Replacement of a lost key entails a \$2 charge. Failure to return a key within three days after Commencement will result in an additional \$10 charge.

Refrigerators. Refrigerators are permitted but are limited as to size, use, and location. All refrigerators must be registered in advance with the Business Office. Specific regulations regarding the use and location of the refrigerators are issued when they are registered. College refrigerators may be rented for \$30 per academic year for use in any dorm. Refrigerators must be emptied and cleaned at the end of the year.

Antennas. The College does not allow the installation of wire antennas or connections between rooms or outdoors.

Laundry Equipment. The College provides laundry equipment in the basements of Barclay, Gummere, and Jones. Irons may be borrowed from the keymasters of these dorms for use in laundry rooms only.

Telephones. Students may arrange to have private telephones installed in their rooms. Representatives of the Bell Telephone Company will be on campus the first week of school to take orders.

Room Decoration. A damage charge is likely when articles are tacked, taped, fastened or pasted with stickers to the walls, furniture, doors or fixtures resulting in damage. Jiffy hooks may be used only in those dorms without picture molding in the walls. Special hangers for use with the picture moldings are available in the bookstore. Use of scotch tape is permitted only in newly renovated sections of Barclay.

Students' Guide 1970-71

Painting of Rooms. Dormitories are painted on a regular schedule. Excessive damage to the painting that requires either repainting or washing will result in a charge to the student. Students are not allowed to paint their rooms.

Damages. The resident of each room is responsible for any damage to his room or its contents, including windows, doors, and furniture, whether he is present or absent when the damage occurs. He may notify the Buildings and Grounds Office of the name of the person responsible for the damage.

New occupants of a room should report in writing all existing damages to the Buildings and Grounds Office. All rooms are inspected prior to occupancy in the fall and existing damages noted. All damages which are not allocated to a particular individual or group will be apportioned among all members of the student body. A list of common charges is available in the Buildings and Grounds Office.

Repairs. Faulty equipment, trouble with heat, light, or water, and damages should be reported to the Buildings and Grounds Office or to the dorm keymaster as soon as discovered.

Maid Service. Maids will clean the room and replace linen once a week. Students should maintain their rooms in an orderly condition. Rooms in a chaotic condition will not be cleaned. On cleaning day, students should clear dressers and desk tops of papers they do not wish disturbed.

Storage. Designated dormitory storage sections will be open on certain days at the beginning and ending of the academic year. At other times, students wishing to arrange for opening of storage areas should contact the keymasters of the dormitories involved. If the keymaster cannot be located, students must contact the Security Department 24 hours in advance to gain access to storage areas. Graduating students and others leaving the College are not permitted to store any articles. The College accepts no responsibility for loss or damage due to theft, fire, or any other cause.

Weapons. Firearms and other dangerous weapons are forbidden on the campus.

Fire. Tampering with fire alarms, fire fighting equipment, and blocking fire doors are serious offenses. These and other actions which create hazards to the safety of others may result in a student's being asked to live off campus as well as charges to cover costs of repairing and reactivating the equipment.

Pets. A one-year-long campus policy which allowed pets on campus during 1969-70 resulted in a great deal of damage to dormitory furnishings and carpeting as well as to campus plant life and wildlife. To avoid such widespread damage, only fish and pets kept in cages are permitted on campus.

Students' Guide 1970-1971

Grounds. Students should recognize that only cooperation by everyone will preserve the beauty of the grounds. Organized games should be played behind Barclay or on the athletic fields.

Security. Efforts are made to protect the security of residents' rooms and storage areas, but the College is not responsible for losses due to theft or other causes. Rooms and windows should be locked. Theft should be reported immediately to the keymaster and the Security Department. Strangers wandering through dorms or other buildings should be questioned or reported to the Security Department immediately.

Housekeeping Inspections. College employees may enter students' quarters during normal working hours to inspect quarters and equipment, to ensure observance of regulations in this handbook, or to perform necessary maintenance. Employees will make an effort to give some advance notification before entering students' quarters.

Items prohibited by College regulations which are visible during Housekeeping or Students' Council inspection may be confiscated. The student will be notified by campus mail, and items will be held in the Security Office for 48 hours after notification to allow appeal.

The Students' Council has the right at any time to conduct a search entailing investigation beyond what is visible. A Council member and a College official must be present for all searches.

Insurance. The College is not responsible, directly or indirectly, for loss or damage to any article of property anywhere on the campus due to fire, water, elements, theft, or action of third parties. Students may wish to carry insurance against loss or damage of personal property. The College offers fire insurance coverage on property of students on a blanket policy. Students' families often have homeowners' policies which cover their possessions at college up to \$1,000.

Vending Machines. Candy and soft drink machines are located in some buildings on campus. Loss of money in the machines should be reported promptly to the Business Office for a refund.

Meeting Rooms. The Students' Council room in Union is available through Council for meetings of campus organizations. Other meeting rooms can be reserved through Mrs. Henry's office on the first floor of Founders Hall.

Music Practice Rooms. Practice rooms and pianos are available for students' vocal or instrumental practice. Interested students should contact the chairman of the music department.

Gambling. Gambling is not permitted.

Students' Guide 1970-1971

Concessions. The privilege of selling on campus is reserved for students. The Students' Council awards concessions. When a student sales representative cannot be found, outside firms must have written permission from the Dean of Students in order to sell on campus. Unauthorized persons anywhere on campus should be reported promptly to a member of Students' Council or the Security Office.

Use of the College's Name. No student organization or individual student may enter into any contractual agreement using the name of the organization or of the College without prior approval by the College through the Dean of Students.

Change of Home Address. Each student must keep the College informed of his home address. Any change in a student's home address should be reported immediately to the Recorder.

MOTOR VEHICLES

Motor Vehicle Regulations. Students wishing to possess or operate a motor vehicle on campus must register the vehicle with the College. Any student may register a car with the exception of resident first-semester freshmen and students receiving financial aid. Students receiving aid who need a car for employment purposes must have permission from Mr. Ambler.

Registration Procedure. A student should register his vehicle with the Buildings and Grounds Department. The registration fee for cars is \$60 per year or \$30 per semester. The fee for motorcycles is \$25 per year or \$12.50 per semester. The fee for additional vehicles is \$15 per car and \$8 per motorcycle. There is no additional charge if a student changes cars during the year, but the change must be reported.

At registration the student must present proof of ownership and the name of the insurance company and the number of the policy under which he has liability insurance. A temporary permit will be issued when insurance or other information is incomplete. Cars must be registered within one week of the opening of the academic year. Cars brought on campus later must be registered within one weekday of arrival.

Haverford and Bryn Mawr students participating in the dormitory exchange program are subject to the motor vehicle regulations of the host campus.

Temporary Registration. A student may have a car at Haverford for up to three days if he secures a temporary registration permit at no charge from the Buildings and Grounds Office.

Students' Guide 1970-1971

Parking. Parking is permitted at any time (except in designated reserved spaces) in the Field House lot and along Carter Road, Walton Road, and Hall Drive.

The Security Department upon request will assist a student with starting a disabled car or in moving it to an appropriate location. Inoperable cars are not allowed on the campus, nor are extensive repairs to be carried out here.

Decals. Car owners should place the College registration decal on the left side of the rear bumper. Defective decals will be replaced without charge. Decals are not transferable from one vehicle to another and must be removed after change of vehicle ownership.

Safe Driving. The campus speed limit is 15 miles per hour. Vehicles must be fully muffled. Cars are allowed on regular campus roads only. They may never be driven on paths or lawns except by prior written permission from the Security Department.

Enforcement and Fines. The person in whose name a vehicle is registered is responsible for any violations charged to it. Violation notices and fines are forwarded by mail, and, if possible, by notice left on the car windshield. Warnings are not given.

Fines are:

Failure to register a vehicle	\$15
Speeding or reckless driving	\$20
Driving or parking on lawns	\$20

All vehicles parked in unauthorized places will be towed away as indicated on posted notices. They will be towed to the Ardmore Park Getty Station, Haverford Road and Lorraine Avenue, Ardmore. To reclaim a towed car, the driver must present his driver's license, auto registration card, and \$20 in cash (plus storage charges after the first 24 hours) at the station. The College receives no part of this fee.

Driving while intoxicated will result in automatic loss of driving privileges.

FOOD SERVICE

Service. Service is cafeteria style. Seconds are usually available. All diners are asked to return their trays to the designated areas.

Students' Guide 1970-1971

Meal Hours. The Dining Center's regular meal hours are:

	Breakfast	Lunch	Dinner
WEEKDAYS	7:30-9 a.m.	11 a.m. - 1 p.m.	5-6:45 p.m.
SATURDAYS	7:30-9 a.m.	11 a.m. - 1 p.m.	5-6:30 p.m.
SUNDAYS	Brunch, 10 a.m. - 1 p.m.		5-6:30 p.m.

On Mondays through Saturdays, continental breakfast will be served from 9 until 9:30 a.m.

The Dining Center will not be open when College is not in session.

Check-In. Students are asked to give their names to the checker as they pick up their trays. Guests may pay at this time.

Guest Meal Rates.

Breakfast	\$.90
Lunch.....	\$1.10
Dinner.....	\$1.50
Sunday Dinner and Steak Dinner.....	\$1.75

Private Dining Room Reservations. There are several small dining rooms which can be reserved for meetings and private and College functions. They should not be used for classes or seminars.

These dining rooms may be reserved on 48 hours notice through Mr. Grant's Office in the Dining Center. There is no charge for use of the room if the meal is to be served, and arrangements for the cost of the meal itself are to be worked out with Mr. Grant.

If diners are to carry their trays to the room, the rates for use of the rooms are:

Room	Capacity	Rate
Sharpless	8	\$ 5
Smith	20	5
Swarthmore	34	10
Bryn Mawr	100	15

Bryn Mawr-Haverford Meal Exchange. Students with Bryn Mawr class schedules that make it difficult to return to Haverford for lunch can take their lunch at Bryn Mawr at no extra charge. The Recorder determines which students are eligible for this "academic" meal exchange and the Haverford Food Manager issues the tickets. Haverford students wishing to take other meals at Bryn Mawr may do so. This "social" meal exchange costs 25¢ per meal. Tickets are purchased at Bryn Mawr's College Inn. Bryn Mawr students (including men in the dorm exchange) may eat at Haverford any time at no extra cost by showing a valid Bryn Mawr ID card to the dining room checker.

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Coop Hours. The Coop is open weekdays from 8:30 a.m. to 2 p.m. and from 8 p.m. to 12 midnight; on Saturday from 9:30 a.m. until 1 p.m. and on Saturday evenings at hours to be announced. The Coop is closed on Sundays.

Meal Refunds. Academic requirements which prevent a student from attending as many as three luncheons per week will entitle a student to receive a refund of 45 cents per meal, subject to the approval of the Associate Dean of the College. These refunds must be requested at the Business Office the Monday following the meals missed. Illness or absence from classes for any other reason which extends for more than four weeks will entitle a student to a prorated refund. No other refunds are possible.

COLLEGE POLICIES

A Statement of Principle About Certain Rights and Obligations.

Haverford College holds that open-minded and free inquiry is essential to a student's educational development. Thus, the College recognizes the right of all students to engage in discussion, to exchange thought and opinion, and to speak or write freely on any subject. To be complete, this freedom to learn must include the right of inquiry both in and out of the classroom and must be free from any arbitrary rules or actions that would deny students the freedom to make their own choice regarding controversial issues. Further, the College endeavors to develop in its students the realization that as members of a free society they have not only the right but also the obligation to inform themselves about various problems and issues, and that they are free to formulate and express their positions on these issues. Finally, the College reaffirms the freedom of assembly as an essential part of the process of discussion, inquiry, and advocacy. Students, therefore, have the right to found new organizations, or to join existing organizations, on or off campus, which advocate and engage in lawful actions to implement their announced goals. Student actions such as those here involved do not imply approval, disapproval, or sponsorship by the College or its student body; neither do such actions in any way absolve a student from his academic responsibilities. Similarly, students are expected to make clear that they are speaking or acting as individuals and not for the College or its student body.

The freedom to learn, to inquire, to speak, to organize and to act with conviction within the bounds of law, are held by Haverford College to be a cornerstone of education in a free society.

Relationship With Law Enforcement Agencies. While the College assumes no responsibility for acting as an arm of the law, neither does it knowingly afford its students any greater protection from the law than that enjoyed by all citizens. In the absence of parents, the College does assume an individual responsibility for assuring its students equal protection under the law.

Security Checks. Members of the faculty are often asked by government agents for information about students or former students. This fact has led to some concern among the faculty. A special committee studied the matter, and submitted a report to the faculty meeting of May 19, 1955. The faculty accepted the report "as a series of advices to be included in the 'Information for Members of the Faculty'." The report is as follows:

STATEMENT OF THE HAVERFORD COLLEGE FACULTY
ON GOVERNMENT SECURITY CHECKS

Chief Justice Holmes once stated that we must retain in this country the "free trade in ideas - that the best test of truth is the power of the thought to get itself accepted in the competition of the market."* Our primary concern about the security program of the federal government is that students and faculty members should not avoid controversial topics or unpopular positions for fear that these may be held against them in the future.

The basic assumption of the security program is that the government has a right to, and indeed must, protect itself from disloyalty and subversion. Ascertaining the loyalty of any individual or the possibility of future acts of subversion by him, however, is fraught with danger. Under present security regulations it inevitably involves considerations of beliefs or opinions of both the person being investigated and the person being asked for information.** We must consider carefully what information should make us question a man's loyalty or think of him as a possible security risk, and what information we should pass on to security investigators.

Let us first look at two general considerations, apart from any special features which may exist because of the nature of an academic community. First, the spoken or written word or the reading or studying of certain materials is far removed from actions. To act requires more than intellectual assent. Often we may not know what we believe until we are challenged to act upon our beliefs. Second, few people reveal to others their deepest thoughts and feelings; and even when they do, opinions which are voiced are easily misinterpreted.

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In addition to these two general considerations, there are certain special features of a college education which must be taken into account in arriving at judgments of loyalty or riskiness of members of the college community. One of the aims of education at college is to question and shake opinions and beliefs previously arrived at largely from knowledge and experience of others and to form opinions which have been tested by the individual himself. The student is exposed to new ideas put forth by faculty members, by other students, or in reading, and has four years in which to find himself, before taking a responsible position in society. During four years he is asked to look with an open mind at different theories and philosophies. He is also encouraged to try out ideas in experience. Many students go through a series of divergent yet passionately held philosophical convictions while at college. They may defend each strongly, this being one way of testing it. The espousal by some students in discussion or papers of ideas considered subversive outside the campus, must therefore be recognized as normal activity in a college.

Indeed, it is the person who has been completely uninterested in controversial problems when in college who may turn in times of crisis to movements advocating treasonable acts for lack of training in analysing the claims and social interpretations of such movements. Experience shows that those who tried to understand controversial issues are usually less likely to be taken in by panaceas. An active interest in such issues may be more a sign of loyalty than ground for questioning a man's loyalty.

It follows from what has been said that there must exist a special relationship of trust among students and faculty in their professional association. Members of the college community should feel confident that expression of their ideas will be regarded as a strictly professional matter. We believe that this relationship of trust is indispensable to a college community if it is to serve its proper function in society.

We believe further that if there is doubt expressed about the loyalty of one member of the college community by another, or about his safety as a security risk because of his thoughts, opinions, or beliefs, as distinct from his character or stability of personality, a full statement of the charge should be given in writing to the investigating authorities, a copy of which should go to the person being charged with disloyalty or potential subversion.

*The dissenting opinion in *Abrams et al V. United States*, 250 U.S. 616 (1919).

**Some information specifically required in a full field check under the existing security program relates to beliefs and opinions - for example, "Membership in, or affiliation or sympathetic association with, any foreign or domestic organization, association, movement, (etc.) which is totalitarian, Fascist, Communist or subversive..." In addition, the regulations state that information collected should not necessarily be limited to that which is specifically required; in practice it may be directly related to opinions or beliefs.

STUDENT SERVICES

Health Service. The dispensary is open from 8 a.m. to 10 a.m., 1 p.m. to 3 p.m. and 6:30 p.m. to 8 p.m. Monday through Saturday, and Sundays 10 a.m. to 11 a.m. for routine office calls. Emergencies will be taken care of at any time. The College physician is available at the infirmary from 2 p.m. to 3 p.m. Monday through Friday and will be called by the nurse on duty if needed at other times. Visiting hours for patients in the infirmary are between 2 p.m. and 4 p.m. and 6 p.m. and 8 p.m. daily. Emergency phone nights and weekends is MI 2-3133. The infirmary is closed during vacations.

Counseling Services. The College offers counseling for problems of a personal, educational, or vocational nature. Students are encouraged to make an appointment with any of the counselors for an evaluation. When a problem warrants, a student may be referred to another member of the staff, or occasionally to an outside source for further help. All student communications with the counseling staff are held in strict professional confidence, as are the names of students counseled. The counseling staff consists of a psychiatrist, Dr. Peter Bennett, and two clinical psychologists, Miss Jane Widseth and Mr. James Vaughan. Appointments should be made at the counseling center on the ground floor of Whitall Hall.

Psychological Testing. The records of the psychological tests which each student takes during Customs Week are available in the counseling center. Any student desiring an explanation of them may ask for an appointment. Students who desire counseling in regard to majors or vocational plans may ask to take supplementary tests of aptitudes, interests, or personality.

Financial Aid - Scholarships. All scholarships for the current year have been awarded. Applications for renewal of scholarships for 1971-72 will be sent to students early in the second semester. Students expecting to receive aid for the first time in 1971-72 should see the Director of Admissions before March 15, 1971.

Financial Aid - Student Loans. A loan fund is available for students who may require financial assistance during their college course. Students wishing loan information should see the Director of Admissions.

Financial Aid - Term Time Employment. All but a very few campus jobs are reserved for students with established need for funds to help offset the education costs of the college. Students wishing to take a job on campus first file an application in the Dean of Students' Office. In addition to jobs on campus, there are regular opportunities for part-time and occasionally steady work off campus. All such jobs are listed in the Dean of Students' Office.

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Summer Employment. While there is no summer placement service, the Dean of Students' Office does maintain a file of summer jobs that have been brought to the attention of the College.

Bryn Mawr and Haverford Bus Schedule. The two Colleges jointly operate a bus to facilitate cooperative classes, lectures, and library use. The bus makes regular trips between the two campuses on weekdays when classes are in session. The bus leaves from Stokes Hall at Haverford and from Goodhart Hall at Bryn Mawr.

Leave Bryn Mawr

8:15 a.m.
9:15 a.m.
10:15 a.m.
11:15 a.m.
12:15 p.m.
1:15 p.m.
2:15 p.m.
3:15 p.m.
4:15 p.m.
5:15 p.m.
7:15 p.m.
9:45 p.m.

10:30 p.m.
(Wed. only)

Leave Haverford

8:45 a.m.
9:45 a.m.
10:45 a.m.
11:45 a.m.
12:45 p.m.
1:45 p.m.
2:45 p.m.
3:45 p.m.
4:45 p.m.
5:45 p.m.
7:45 p.m.
10:15 p.m.

10:45 p.m.
(Wed. only)

Changes or additions to this schedule may be announced in the fall. Also, there may be limited car service to Swarthmore arranged for in the fall.

Student groups may charter the Haverford-Bryn Mawr bus on weekends provided a regular driver is available. There is an initial fee of \$9.60 plus \$4.80 per hour and 20 cents per mile. The minimum charge is \$35. Inquire at Mr. Trucks' Office at Bryn Mawr.

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Graduate School Catalogs and Information. The catalogs of most colleges and universities in the United States are available for loan from the Recorder's Office. Announcements of special summer and graduate programs of study as well as information about fellowships, are posted along the stairway leading to the Recorder's Office.

Selective Service. Students are required by law to register for Selective Service on or within five days after their 18th birthday. Students on campus can register with the nearest local board in Bryn Mawr.

Since especially at this time Selective Service policies, regulations, and procedures are often changing or subject to interpretation, all students are urged to keep themselves informed and up-to-date on these matters.

Students wishing general information or advice about the draft should talk with Mr. Lyons, Mr. Kannerstein, or Mr. Potter. Students considering conscientious objection are invited to consult with Mr. Vaughan. In addition, other members of the administration, faculty, and student body are usually able and willing to give advice on a variety of draft matters. Their names will be made available during the year.

Graduate School Advisors. Students planning to do graduate work in a departmental subject should consult with the chairman of the department at Haverford. Students planning to go to professional schools may seek advice and information from appropriate faculty members as follows:

Education	Mr. Lyons
	Mr. Kannerstein
Engineering.....	Mr. Hetzel
International Affairs.....	Mr. Hansen
Law.....	Mr. Lane
Medicine.....	Mr. Kessler
Theology.....	Mr. Luman

Placement Services. Haverford's Placement Service is under the direction of Mr. Sheppard, Director of Alumni Affairs. A list of positions open in business, government, and institutions is maintained in the Alumni Office in Founders. Interviews with representatives of business concerns, government agencies, and institutions can be arranged.

Peace Corps and VISTA. Students interested in applying for the Peace Corps or VISTA should talk to Mr. Lyons, the campus liaison officer for these organizations.

Use of Campus Mail Services. Every now and then members of the campus community feel compelled to share some wise piece of writing, or some announcement of assumed importance with all other members of the campus community. The policies regarding such "general distribution" materials are simple, and are intended to assure that the origin of the material is always an open matter.

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1) The use of the campus mail service, without cost, is restricted to members of the College community, i.e., faculty, students, staff, Board and Corporation members. 2) EVERY piece that is distributed must carry clear explicit identification of who the originator is. This means that each piece should carry the name of at least one individual who assumes responsibility for the mailing, together with the name of the sponsoring organization if any. 3) It is expected that no member of the College community will allow his name to be used to permit an off-campus commercial organization to distribute its advertising material through the College mail room without going through the U. S. mail service. The only exception to this will be for franchises which have been allocated through Students' Council to current students.

Items Lost, Found, or Stolen. Items that have been lost, found, or stolen should be reported to the campus Security Office. The security functions of this office are more effective when students promptly report items they believe may have been stolen.

The Campus Calendar - Registering Campus Events. All campus events other than regularly scheduled academic functions and intercollegiate athletics, are registered in advance in Mrs. Henry's Office. This includes events such as social events, mixers, lectures, concerts, etc.

Bookstore. The book store is located in Union and is open from 10 a.m. to 4 p.m. Monday through Friday. Extended hours are announced during the beginning of each semester.

Accident Insurance. Every student is covered by a blanket accident policy paid for from the unit fee. This insurance pays actual expenses resulting from any accident up to a limit of \$1,000 for each accident. All claims under this policy should be directed to the College physician.

Notary Public. A notary public is provided for the convenience of students in the Recorder's Office and in the Business Office.

Guests. A student can arrange rooms in faculty homes and at Bryn Mawr for out-of-town dates. The faculty does not expect remuneration for this service, but students should observe the following suggestions: 1) The faculty host or hostess should be contacted as soon as possible. She should be given the name and home address of the guest and the approximate time of arrival and departure. 2) The hostess should be kept informed of any changes in plans. 3) Thank-you notes are appreciated.

Art Rental. The College has a collection of framed prints which are rented to students at a very nominal rate. Announcements will be made in the fall about when students may make selections from this collection.

Check Cashing. The cashier's window, on the second floor of Hilles, is open to cash student checks from 9:45 a.m.-11:45 a.m. Monday through Friday.

STUDENT GOVERNMENT

- I. The Honor Code
- II. Students' Association Constitution
- III. Student Officers and Appointees

This is the Haverford Honor Code. We ask that you read it carefully, bearing in mind that these are the standards and concepts by which the College functions as a community. The Standards section is part of the constitution of the Students' Association. The Specific Concerns are reviewed each year at the beginning of the second semester. The concerns printed below were adopted in a Plenary Session, February 11, 1970.

Article VI. The Honor Code

Section 1. Standards

Each student shall accept the Haverford Honor Code realizing that it is his responsibility to uphold the Honor Code and the attitude of personal and collective honor on which it is based.

One of the stated purposes of Haverford College is that we strive for a sense of community marked by a lasting concern of one person for another and by shared responsibilities for helping the community achieve its highest aims. The Honor Code, as the foundation of community life at Haverford College, is the demonstrated concern of people for each other. We here attempt to express in words the form that these concerns take, while asserting that any such statement has meaning for the community only as it forms a basis for subsequent action by individuals.

The goal of the Honor Code is to encourage individuals to develop responsible judgment capable of directing their conduct as active members of the community. The code demands that every individual in the community be aware of his own standards of behavior in relation to the standards of others. Upon entering Haverford College, every student must sign the following pledge: "I hereby accept the Haverford Honor Code and the attitude of personal and collective honor on which it is based." This attitude is manifested in confrontation, respect, concern and discretion.

In its broadest sense, confrontation is communication. A confrontation means subjecting one's beliefs and those of others to a new examination. It is not a unique or limited process; it is simply the dialogue which logically should occur between persons with different standards--an expression of concern and of the need to understand the standards of others. A confrontation is not an inquisition, but rather an exchange of values. The process of forming personal standards involves both interpersonal and personal confrontation. These standards then form the basis of community at Haverford College and provide the necessary standards of community life.

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Respect is the attitude necessary for confrontation to occur and entails the recognition of other individuals as members of the community. Discretion is the manifestation of respect in one's interaction with others. The fact that an individual is morally at peace with his actions does not confer the right to impose their existence upon the sensitivities of others. The practice of respect and discretion is not an admission that one's own beliefs are wrong, but rather a recognition of and a concern for the community of which one is a part.

The code emphasizes the dual necessity of personal freedom and community life. The individual is obligated to make decisions under the scrutiny of his conscience, to challenge and accept the challenge of others whose views differ from his own, and to modify those decisions if it becomes clear that they were made upon an unsatisfactory basis. It is imperative that the attitude of personal and collective honor not be limited by any rigid definition of the words used herein to describe it. The vagueness of these precepts raises many questions; but they are healthy questions which must be answered, not by the external authority of others, but rather by the individual with the help of the concerned individuals who comprise the college community.

Section 2. Implementation

1. A plenary session of the Students' Association shall be held during the first three weeks of the second semester of each year to formulate a set of specific concerns to implement the standards of the Honor Code. These specific concerns shall help students determine the conduct which they must observe under the standards of the Honor Code set forth in Article VI, Section 1. Though different Honor Code Councils may interpret specific matters pertaining to the Honor Code in different ways, only legislative action of a plenary session of the Students' Association can maintain or change the details of the specific concerns.

2. Each entering student shall, upon his agreement to enter Haverford College, sign the following pledge: "I hereby accept the Haverford Honor Code realizing that it is my responsibility to uphold the Honor Code and the attitude of personal and collective honor on which it is based."

3. After each of his examinations each student shall sign on his examination paper the following pledge: "I accept full responsibility under the Haverford Honor Code for my conduct on this examination."

Section 3. Reporting Procedure

The student who believes that his actions may be in conflict with the principles of responsibility and respect inherent in the Honor Code shall discuss the matter immediately with a member of the Honor Code Council. Should a student believe that the actions of another may be in conflict with the Honor Code, he shall discuss the matter immediately with the

individual concerned. If after discussion either student finds said actions to be in possible conflict with the Honor Code, the student whose actions are in question shall bring the matter to a member of the Honor Code Council. If the matter cannot be resolved on this level, it then comes to the entire Council.

SPECIFIC CONCERNS

Arising from personal concerns, there are a number of questions that become specific community concerns. An opinion is voiced by the community in these particular areas and codified in the following sections.

A. Academic Work

Each student shall be responsible for his proper conduct in all scholastic work.

During examinations: (1) No student shall give or receive aid. (2) No person shall act as an official proctor. (3) Students shall obey all restrictions which the professor may prescribe as to time, place, and material aids to be used.

In the preparation of papers: (1) A student shall never represent another person's ideas or scholarship as his own. He shall indicate his sources by using, where appropriate, quotation marks, footnotes and a bibliography. (2) Professors prescribe limitations on the sources to be used: waive any restrictions concerning crediting of sources. (3) Permission must be obtained in advance from all professors concerned if a paper is to be submitted for credit in more than one course.

In the preparation of written homework and laboratory reports: (1) Students may work together, provided that each member of the group understands the work being done. (2) All data must be reported by the student as observed in his experiment. (3) Professors may (a) require that secondary sources consulted be credited. (b) waive any restrictions in 1 and 2 of this paragraph.

Responsibility for observing special requirements: A student is responsible for observing any requirements which the professor announces under the option specified above.

B. Social Regulations

1. Each student shall be responsible for his proper conduct with respect to women guests and the individuals comprising the Haverford College community. Any person aware of an act which fails to show proper respect is obligated to confront the individual involved. If confrontation does not resolve the conflict, a member of the Honor Code Council must be notified.

2. Students are expected to exercise good judgment as to a reasonable hour of departure of women from the dormitory, taking into consideration the convenience of other students and any possible reflection on the reputation of the woman guest, the individual student, and the college. Specific time limits become unnecessary if students act with concern for their fellow students and women guests. Every student should recognize that

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this freedom to exercise individual judgment as to a reasonable hour of departure of women guests, like all other freedoms in the Honor Code, is dependent on his ability to exercise responsibility.

C. Drugs and Intoxicants

Through the statement of policy regarding drugs and intoxicants, the Haverford student body is trying to prevent the development of the many serious problems inherent in the drug phenomenon; a phenomenon present here and on many other campuses.

Intemperate use of mild drugs and intoxicants, and simple use of dangerous and powerful drugs, are acts which often have interfered with a student's primary roles at the College: disciplined involvement in scholarship and healthy personal development. There is ample evidence that individual students have been seriously hurt by drugs. The medical and psychological services are not intended for long-term treatment of students who become severely abnormal or impaired because of drug use or other causes.

The drug phenomenon also interferes with the maintenance of a free and healthy campus community. State laws make it illegal for minors to possess or consume alcoholic beverages. A variety of State and Federal laws prescribe severe penalties for the use or possession of dangerous drugs and narcotics. Marijuana is legally considered to be a narcotic.

The College assumes no responsibility for acting as an arm of the law. Neither will it knowingly interfere to protect students from law enforcement activities or their consequences. In the absence of parents, the College does assume an initial responsibility for assuring its students equal protection under the law.

The sometimes unduly severe sanctions of the larger society make many students fearful of openly (and lawfully) discussing drugs and drug-related issues. This is at a time when the issues and related personal beliefs all need full and open discussion.

Certain drug-related activities almost always violate the collective sense of respect for the welfare of the community, and for the rights and welfare of the individuals within it. Because of this, each member of the community is obliged personally to confront these queries:

(1) Do my actions involve non-students in drug use or distribution either on or off the campus?

(2) Do my actions involve the use of addictive and/or especially dangerous drugs such as the opiates, heroin, amphetamines, barbiturates, or potent hallucinogens? Do they constitute abuse, by frequent use or excessive dosages, of potentially dangerous drugs such as cannabis or alcohol?

(3) Am I facilitating in any way an unwise choice by another student to use drugs; a choice based on ignorance of the full legal and medical (and therefore academic) risks involved?

(4) Am I party to, or aware of, any drug-related activity which exposes the College to the risks of outside intervention; an intervention which would threaten the development of the openness and trust necessary to curb drug abuse within our community?

(5) Have I taken care to assure by forthright discussion that my drug-related activities are not offensive to others? That they have not jeopardized the rights of others?

(6) If I have been offended or jeopardized by the drug-related activities of another student, have I made reasonable efforts to discuss my concern with him in a friendly and forthright manner?

(7) Where the propriety of my drug-related actions, or those of another, is still in question after discussion, have I sought the counsel of other students, the appropriate officers of the Students' Association, or the Administration?

The Reporting Procedure clause of the Honor Code applies to this section.

EXPLANATION OF THE TERM "QUERY"

Queries come out of Haverford's Quaker traditions and practices. A query challenges the community and individuals to examine their actions and attitudes. Specific queries arise out of the community's concern over problems which have led to conflict in the community and harm to individuals. Each Haverford student is obligated to confront personally the standards expressed in these queries.

ADMINISTRATION OF THE HONOR CODE

Any student brought before the Council for discussion of a possible breach of the standards of the Honor Code is considered individually. The Students' Association, in granting certain judicial powers to the Council, recognizes each person and each incident as having unique characteristics. Consequently, flexibility of evaluation in an Honor Code discussion is necessary if the rights and freedoms granted by the Honor Code are to be preserved and guaranteed.

The Honor Code Council has responsibility for maintaining the Honor Code and for responding to actions inconsistent with it. In situations involving the section on Drugs and Intoxicants, however, the First Vice-President and the Dean of Students are delegated initial responsibility. When any possible breach of responsible conduct which seems to require further action comes to the attention of the Honor Code Council, the representatives who comprise it shall discuss the relative seriousness of the matter and agree on how it best should be handled. Discussion with the student or students involved is often sufficient. If not, the problem comes to an Honor Code Jury of 12 students.

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Disciplinary action which may limit a student's freedom, or even separate him from the College, is taken only when it is clear that discussion alone is not sufficient to resolve the difficulty and that action is called for to protect the community and the individuals who comprise it from serious damage.

CONSTITUTION OF THE STUDENTS' ASSOCIATION OF HAVERFORD COLLEGE

Article I. Preamble

Section 1. Name

The name of this Association shall be the Students' Association of Haverford College.

Section 2. Membership

All students enrolled at Haverford College are ipso facto members of the Students' Association.

Section 3. Powers

All powers herein defined derive from the Students' Association and are delegated by it to such bodies of its own creation as are needful to carry out the functions of student self-government.

Section 4. Right of self-government

The right of student self-government is granted by the Administration of Haverford College to the Students' Association provided that the Students' Association maintains the standards of the College to the satisfaction of the Administration.

Article II. Legislative Powers

Section 1. Regulations and Council Rules

1. The Students' Association shall make Regulations governing the conduct of students on campus. Regulations pertaining to the Honor System shall be enacted by a two-thirds vote of a meeting of the Association. Every member of the Association is responsible for enforcement of these regulations. Should the Administration find any regulation unacceptable, the dispute shall be referred to three responsible and impartial persons, satisfactory to the Association and the Administration.

2. The Students' Association delegates such legislative authority to the Students' Council as is necessary to carry out the functions of the Council herein provided for. Such legislation shall be well-publicized and shall be reported to the members of the Association at hall meetings, provided for in Article III, Section 9. The Students' Association reserves to itself the ultimate legislative authority, to be exercised only in plenary session.

Section 2. Meetings of the Association

1. The Students' Association shall meet in plenary session within the first three weeks of each semester.

2. The President of the Students' Association shall call a plenary session of the Students' Association whenever he deems it necessary by publicizing it as far in advance as possible of the time scheduled for the plenary session. The number of students required for a quorum shall be forty per cent of the Students' Association.

3. The President shall call a plenary session of the Association in the manner provided for in paragraph 2 of this section whenever he receives a petition signed by ten per cent of the members of the Association stating the purpose for which the plenary session shall be called. Such plenary sessions shall be held within seven (7) days of the receipt of the petition.

4. The President shall publicize the agenda of any plenary session as far in advance of the meeting as possible.

5. The "Haverford Rules of Parliamentary Procedure" shall be the authorized and final guide in all parliamentary procedure except wherein it conflicts with the Constitution of the Students' Association or the Regulations of the Students' Association. The President of the Association shall appoint, upon assumption of office, a Parliamentarian from the members of the Students' Council. The Secretary of the Students' Association shall have with him at plenary sessions of the Association a copy of the "Haverford Rules of Parliamentary Procedure".

Article III. Executive Powers

Section 1. Students' Council

The executive power of the Students' Association is vested in a Students' Council.

Section 2. Membership of the Students' Council

The members of the Students' Council shall be the officers in the Executive Committee of the Students' Association and the Hall Representatives.

Section 3. Meeting of the Students' Council

The President of the Students' Association shall call a meeting of the Students' Council at least once each month. A quorum of the Council shall consist of representatives from two-thirds of the hall groupings. Upon the written request of at least five members of the Students' Council, an official meeting of that body shall be called immediately. Legislative and executive sessions of the Students' Council, except those concerned exclusively with appointments and awards, shall be public. The agenda for Council meetings shall be well-publicized as soon as possible before each meeting.

Section 4. Nomination and Election of Officers in the Executive Committee of the Students' Association

1. Nominations for the offices of the Executive Committee--President, First Vice-President, Second Vice-President, Secretary, and Treasurer--of the Students' Association shall open on the second Friday of the second semester and shall close on the following Tues-

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day. Nominations for the offices of President and of First and Second Vice-Presidents shall be restricted to members of the Junior Class; nominations for the offices of Secretary and Treasurer shall be restricted to members of the Freshman and Sophomore Classes. Should there be more than four (4) candidates nominated for any officer, there shall be a primary election for that office on the Monday following the close of nominations, to be conducted according to the preferential system. Space shall be provided for write-in votes. The four (4) highest candidates shall then enter the final election for that office.

2. On the Monday following the third Friday of the second semester, the Students' Association shall vote by secret ballot to elect members of the Executive Committee. Voting shall be held according to the preferential system; space shall be provided for write-in votes. If, for any reason, more than one election is required to secure a valid vote, or if a primary election is necessary, subsequent voting shall be called for by the Executive Committee within twenty-four hours of the previous voting. Votes must be cast officially by at least forty per cent of the membership of the Students' Association for the election to be valid.

Section 5. Selection of Hall Representatives

Each hall grouping, whose dimensions shall be stipulated by the Students' Council, by a method of its own choosing, shall designate from itself a representative to the Students' Council within the first three weeks of the first semester of each year, the exact date to be specified by the Executive Committee. At the time of selection, each hall grouping shall determine the procedure by which the representative shall be removed from office, as provided for in Article V, Section II, paragraph 2. Upon selection, each Hall Representative shall designate from his hall grouping an alternate representative, who shall represent his hall in the absence of the regular representative. Any dispute about the selection of a Hall Representative arising among the members of a hall grouping shall be referred to the Executive Committee.

Section 6. Nomination and Election of Members of the Honor Code Council of the Students' Association

1. Nominations for members of the Honor Code Council shall open on the Tuesday following the third Friday of the second semester and shall close on the following Friday. The Freshman Class shall elect three (3) freshmen, the Sophomore Class three (3) sophomores, and the Junior Class one (1) junior to serve with the President and First Vice-President on the Honor Code Council.

2. On the Monday following the close of nominations, each class shall vote by secret ballot to elect its members of the Honor Code Council. Voting shall be held according to the preferential system of voting. Votes must be cast officially by forty per cent of the membership of a class for the election to be valid.

3. Within two weeks following the selection of Hall Representatives, the exact date to be specified by the Executive Committee, the Freshman Class shall elect three (3) freshmen to serve on the Honor Code Council.

4. The Executive Committee shall have final authority over the procedure for all elections.

Section 7. Assumption of Office

1. The officers in the Executive Committee of the Students' Association elected in the manner provided for in Section 4 of this article shall assume office on the fourth Sunday of the second semester.

2. The Hall Representatives selected in the manner provided for in Section 5 of this article shall assume office on the date, specified by the Executive Committee, by which each hall grouping is to have selected its representative.

3. The members of the Honor Code Council of the Students' Association elected in the manner provided for in Section 6 of this article shall assume office on the day they are elected.

Section 8. Duties of the Council and the Officers in the Executive Committee of the Students' Association

1. The Students' Council shall supervise the Regulations legislated by the Students' Association, all extra-curricular activities with the exception of athletics, and perform other duties as herein provided.

2. The President of the Students' Association shall preside at all plenary sessions of the Association and at all meetings of the Students' Council. He shall conduct the election of officers in the Executive Committee of the Association and shall certify and publish the results of these elections, specifying the name of candidates nominated or elected. Each year he shall supervise the presentation of the system of student self-government to the Freshman Class. In the absence of either of the Vice-Presidents, the Secretary, or the Treasurer from any plenary session, the President shall appoint from the other members of the Council a Vice-President, Secretary, or Treasurer pro tempore. He shall serve as a member of the Honor Code Council. He shall nominate, with the concurrence of the Executive Committee, student representatives to faculty-student committees, at least one for each committee from the other members of Council. He shall nominate, also with the concurrence of the Executive Committee, at least one member of Council to each Students' Council Committee.

3. The First Vice-President of the Students' Association shall serve as Chairman of the Honor Code Council and shall carry out the Council's responsibility. If the office of President is vacant or if the President is absent from any plenary session of the Association or meeting of the Council, the First Vice-President shall act as President pro tempore.

4. The Second Vice-President of the Students' Association shall serve as coordinator of all faculty-student and Students' Council Committees. He shall bear primary responsibility for drawing up the agenda for each Council meeting and for publicizing it before the meeting to the Hall Representatives and the rest of the student body. He shall also be responsible for soliciting committee reports and for summarizing them periodically in a report to the Hall Representatives.

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5. The Secretary of the Students' Association shall keep in permanent form minutes of all plenary sessions of the Association and of all meetings of the Council. He shall publicize the minutes of all plenary sessions and of all Council meetings.

6. The Treasurer of the Students' Association shall disburse the funds of the Students' Association and shall keep a permanent record of all transactions. He shall appoint from the Students' Council an assistant Treasurer. When retiring from office, he shall post or publish for the inspection of the members of the Students' Association a summary of his accounts.

Section 9. Duties of Hall Representatives

The Hall Representative shall hold hall meetings to discuss the issues on the agenda of each Council Meeting. He shall be responsible for communicating the views of the members of the hall to the Council or to any of its committees. He shall discuss any action of Council or its committees with the members of his hall.

Section 10. Duties of the Honor Code Council of the Students' Association

The Honor Code Council of the Students' Association shall have the responsibility of deliberation and interpretation of specific matters pertaining to the Honor Code. Each year, the Honor Code Council shall present the Honor Code to the Freshman Class.

Section 11. Committees

Each Students' Council shall have the power to establish such committees as it deems necessary to aid in the execution of its duties.

Article IV. Judicial Power

Section I. Honor Code Jury

The judicial power of the Students' Association is vested in the Honor Code Jury.

Section 2. Membership

The membership of the Honor Code Jury shall include four members of the Honor Code Council, including the First Vice President, and three others to change each time the Honor Code Jury is called into session. Membership in the Honor Code Jury shall also include eight other students. These eight shall be chosen when needed by lot from a pool of 50 eligibles. The 50 eligibles shall be chosen each month, by lot, from the Students' Association, by the President of the Students' Association. Each student called to service on the Honor Code Jury shall be expected to serve. Exceptions may be granted by the First Vice President at his discretion. The First Vice President shall serve as chairman of the Honor Code Jury.

Section 3. Functions

The Honor Code Jury shall meet when called by the Honor Code Council to consider matters of application of the Honor Code to particular cases or issues when more personal and individual attempts as specified in the Reporting Procedure of Article VI, Sec. 3 of

this Constitution have failed. The Honor Code Jury shall discuss the matter in question with all individuals involved, and among its own membership, and respond with the course of action which it believes most beneficial to the individual and to the community at large.

Section 4. Scope of Action

The Honor Code Jury shall take action within such limits as the Students' Association may prescribe.

Section 5. Rights of Those Appearing Before Honor Code Jury

An individual appearing before Honor Code Jury has the right to petition Honor Code Jury to exclude any of its members from the consideration of his case; the right to bring with him any other persons of his choosing; and the right to publicize his own case as he sees fit.

Article V. Resignation and Removal of Officers and Representatives

Section 1. Vacancies

1. In the event of the resignation or removal of an officer in the Executive Committee of the Students' Association, the Association shall fill immediately the vacancy with a member of the appropriate class according to the election procedure specified herein. In the interim the vacancy shall be filled by the pro tempore replacements provided for herein.

2. Should a vacancy occur among the Hall Representatives when a representative ceases to reside on the hall or when he assumes an elective Council office, it shall be filled immediately, according to the selection procedure specified herein.

3. Should a vacancy occur among the members of the Honor Code Council, it shall be filled immediately by the class whose representation has been reduced, according to the election procedure specified herein.

Section 2. Removal

1. Any officer in the Executive Committee of the Students' Association shall be removed from office for malfeasance or neglect of duty or other good cause by not less than a two-thirds vote of a plenary session of the Students' Association. The Council shall call a plenary session for this purpose at its own discretion or on the petition of ten per cent of the Students' Association.

2. Any Hall Representative shall be removed from office for any good cause by the hall grouping which he represents, using the procedure chosen by that hall grouping at the selection of the representative, as outlined in Article III, Section 5. Any dispute about the removal of a hall representative arising among the members of a hall grouping shall be referred to the Executive Committee.

3. Any member of the Honor Code Council shall be removed from office for malfeasance or neglect of duty or other good cause

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by not less than a two-thirds vote of at least forty per cent of the members of the class which he represents, to be conducted in a general meeting of that class.

Article VI. The Honor Code
(Please see page 15 of this Handbook)

Article VII. Amendments

Section 1. Proposal

Amendments to this Constitution may be proposed by the Students' Council or by action taken in a plenary session of the Students' Association called for that purpose.

Section 2. Ratification

Amendments shall be ratified by a two-thirds vote of a plenary session of the Students' Association.

Section 3. Approval

Amendments shall go into effect upon approval by the President of the College.

Article VIII. Implementation and Provisional Basis of This Constitution

Section 1. Implementation

The present Students' Council shall take immediate steps to implement this Constitution upon its ratification.

Section 2. Provisional Basis

Upon its ratification, this Constitution shall be considered provisional. A plenary session shall be called for the purpose of a vote on the final acceptance or rejection of this Constitution. This plenary session shall be held no later than February, 1971. At this time, if this Constitution is rejected, the previous Constitution will be operative; if this Constitution is accepted, this Article shall be considered null and void, and shall be replaced by the following Article:

Article VIII. Previous Constitutions Invalid

With the enactment of this Constitution all previous Constitutions of the Students' Association of Haverford College shall be rendered null and void.

STUDENT OFFICERS AND APPOINTEES

Executive Committee of the Students' Association

Tom Gowen '71, President
Bob Sandhaus '71, First Vice President
Jon Delano '71, Second Vice President
Steve Meltzer '72, Secretary
Kathe Johnson '72, Treasurer

Honor Code Council

Bob Sandhaus '71
Tom Gowen '71
Mike McLemore '71
Larry Phillips '72
Tom Wright '72
Paul Haagen '72
Josh Kadish '73
Dave Fogelson '73
Chris Wise '73
Three members of Class of 1974 to be elected early in October.

Students' Council Committee Chairmen (appointed by Executive Committee)

Art Series - Steve Newcomb '71
Film Series - Alex Hancock '73 and Bill Harvey '71
Dining Room - Robert Katz '72
Social - Peter Hales '72

Student Representatives on Board of Managers (chosen by Students' Council)

Mike McLemore '71
David Simmons '72

Student Representatives to Faculty Committees (appointed by Executive Committee)

Student Standing and Programs	Andy Colbert '72 Roger Director '71 Rich Santore '71
Educational Policy	Irv Acklesberg '72 Alan Burke '71
Administrative Advisory	Paul Hensley '72 Bucky Mann '72 Jon Tumin '73
Educational Environment	Bart Feroe '71 Ken Ludwig '72 Chris Wise '73

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Long Range Planning

Chris Attinger '72
Bob Atwood '73
Chris Scott '71
Bob Stewart '71

Distinguished Visitors

Bob Katz '72
Duncan MacLean '71
Peter Rozental '73

Educational Involvement

Peter Goldberger '71
Carl Tannenbaum '71

Community Concerns

Don Berry '71
Chris Kerr '72
Joe Mason '71
Roger Midgett '72

Alumni Relations and Development

Larry Phillips '72
Rob Weisberg '72

University City Science Center

Mark Kleiman '72

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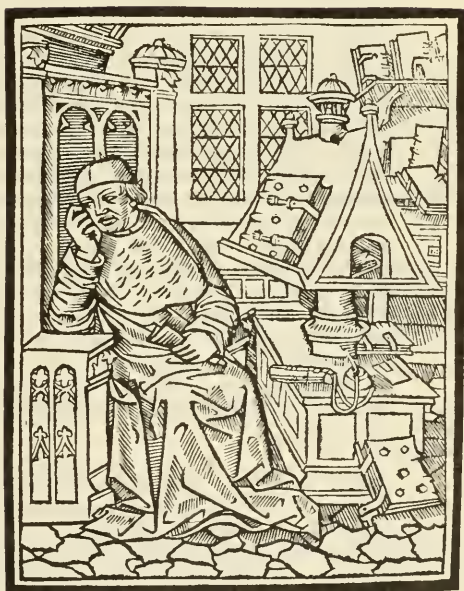
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LIBRARY

GUIDE



HAVERFORD COLLEGE
1970



HAVERFORD COLLEGE LIBRARY The library at Haverford College consists of two main parts: the Thomas Wistar Brown Library, portions of which date from 1864; and the James P. Magill Library, completed in 1968. When the Magill

Library was built, extensive alterations and improvements also were made to the older structure. The Library has some 73,000 sq. ft. of floor space. Its shelves will hold a half-million volumes, and it can seat 500 persons. Air and humidity are controlled throughout the building. Rare books and manuscripts are guarded in a fireproof vault protected by a carbon-dioxide fire-extinguishing system. There are 260 carrels. Thirty-one are enclosed and reserved for faculty use, and 24 are reserved for students who wish to use typewriters. The original north wing of the Library building was renovated in 1952 and named the Philips Wing in honor of one of the college's principal benefactors, William Pyle Philips, a member of the Class of 1902.

WHO MAY USE THE LIBRARY

This is a private library provided for the

use of the faculty, students, and other members of the Haverford academic community. It is not open to the general public. Exceptions to this rule are made for several categories of persons. Students and faculty of Bryn Mawr College and of Swarthmore College are extended use of the library upon presentation of proper identification. Haverford College alumni, members of the Library Associates, and faculty members of neighboring colleges and universities may also use the library, and will be provided library cards. Other persons wishing to use the library, including checking out books, will be asked to pay an annual fee of \$10.00. Regulations are available at the Circulation Desk. This fee will not be collected from persons wishing to check references in the library. Such visitors will be asked to sign a visitor's book and are requested to come during the day, in order to leave the library free for Haverford and Bryn Mawr students in the evening.

LIBRARY HOURS

MAIN LIBRARY: 8:30 a.m. to 12 midnight, Monday - Friday; Saturday, 8:30 a.m. to 6 p.m.; Sunday, 1 p.m. to 12 midnight. The Quaker Collection: 9 a.m. to 12:30 p.m., and 1:30 p.m. to 5 p.m., Monday - Friday. DEPARTMENTAL LIBRARIES: Stokes: Monday - Friday, 9 a.m. to 6 p.m., 7 p.m. to 12 midnight; Saturday, 9 a.m. to 6 p.m.; Sunday, 1 p.m. to 6 p.m., 7 p.m. to 12 midnight. Sharpless (Biology): Monday - Saturday, 8 a.m. to 11 p.m.; Sunday,

Initial "H." Decorated uncial of about 1475 (reduced). The layout of the cover is typical of those of sixteenth-century imprints.

2 p.m. to 11 p.m. Hilles: Monday - Friday, 8 a.m. to 6 p.m.; 7 p.m. to 10 p.m.; Saturday, 8 a.m. to 6 p.m.; 7 p.m. to 10 p.m.; Sunday, closed. Drinker: Hours to be posted at Drinker and in Main Library. Observatory: Open by appointment.

CARD CATALOG To ascertain whether a book is owned by the Library, look in the Card Catalog under the author's name, the title of the book, or the name of the editor or translator of the book. When works on a certain subject, rather than a specific book, are wanted, these can be found by looking in the catalog under the appropriate subject heading, i.e., a German-English dictionary could be found under the heading "GERMAN LANGUAGE -- DICTIONARIES -- ENGLISH."

In order to find the book in the stacks after deciding, by consulting the catalog, which book or books will be useful, it is necessary to note (in writing) (1) the call number (including any caption above the number), which will be found in the upper left corner of the catalog card and (2) the accession number, which will be found just below the call number. The call number (example: HC 102.5.A2 H7) tells where in the Library the book is shelved. (See alphabetical location guide below.) The accession number (example: 223416) is used when charging the book at the Circulation Desk in order to take it out. If the book wanted is not found in its place on the stack shelves, the accession number should be given to the attendant at the Circulation Desk, who will be able to give its location.

Special locations for books (e.g., Matzke Collection, Gummere-Morley Room, Music Library, Biology or some other laboratory) are indicated on the catalog cards by captions printed over the call numbers. In these cases, the book will be found not in the same area of the main library as other books with the same classification but in the particular room of the Library or in the other building mentioned. An asterisk (*) beside a call number indicates that the book is oversized; if the book is not in its normal place on the shelf, it is shelved on the bottom shelf in the same section of the stack.

The Haverford Card Catalog includes author cards for all books added to the Bryn Mawr College Library since 1947. It also contains full entry (author, subject, title) cards for Russian holdings at Bryn Mawr and Swarthmore. Books are not to be put back on the shelf by the reader. They should be left on the nearest table.

ALPHABETICAL LOCATION GUIDE TO BOOKS BY CALL NUMBER

Classes

A GENERAL WORKS
(General encyclopedias, reference books, periodicals, etc.)
Basement

B PHILOSOPHY—RELIGION
B-BJ Philosophy, incl Psychology
BL-BX Religion Basement-1st Tier
BX 7600-7799 Quakerism 2nd Tier

C AUXILIARY SCIENCES OF HISTORY
CB History of civilization
CC Archaeology
CD Archives
CJ Numismatics

CN, & 687-763 (old classif.) Epigraphy

CR Heraldry

CS Genealogy

CT Biography (General) 1st Tier

D HISTORY: GENERAL AND OLD WORLD
(Including geography of individual countries)

D World history

DA Great Britain

DB Austria

DC France

DD, etc. Other individual countries
1st Tier

E-F	HISTORY OF AMERICA (Including geography of individual countries)	
E 1-143	America (General)	
E 151-857	United States (General)	
F 1-957	United States: States and local	
F 1001-1140	Canada	
F 1201-3799	Spanish America	1st Tier

G	GEOGRAPHY, ANTHROPOLOGY	
G	Geography (General)	
GB	Physical geography	
GC	Oceanography	
GN	Anthropology	
GR	Folklore	
GV	Recreation	1st Tier

H	SOCIAL SCIENCES	
HA	Statistics	3rd Tier
HB-HJ	Economics	3rd-4th Tiers
HM-HX	Sociology	4th Tier

J	POLITICAL SCIENCE	
JA-JC	Political science	
JF-JQ	Constitutional history and public administration	
JS	Local government	
JV	Colonies, Emigration, etc.	
JX	International law	4th Tier

K	& 276-299 (old classif.) LAW	4th Tier
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L	EDUCATION	4th Tier
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*M	MUSIC	
M	Scores	
ML	Literature of music	
MT	Musical instruction	4th Tier

N	FINE ARTS	
NA	Architecture	
NB	Sculpture	
NC	Graphic arts	
ND	Painting	
NK	Decorative arts	
NX	Arts in general	1st Tier

P	LANGUAGE AND LITERATURE	
P	Philology and linguistics	
PA	Classical languages and literatures	
PA 8000-8595, & 772-773 (old classif.)	Medieval & Modern Latin literature	
PC	Romance languages	
PD-PF	Germanic languages, including PE, English	
PG	Slavic languages and literatures	
PJ-PL	Oriental languages and literatures	
PN	General and comparative literature	
PQ	Romance literatures	4th Tier
PR	English literature	2nd Tier (South Wing)
PS	American literature	4th Tier
PT	Germanic literatures	5th Tier
Fiction	Fiction in English. Juvenile literature	3rd Tier

Initial "S"(opposite).
Hans Holbein. Used
by the Basel printer
Valentin Curio --
1522 (reduced).

**Q SCIENCE					
QA	Mathematics		TG	Bridge engineering	
QB	Astronomy		TH	Building construction	
QC	Physics		TJ	Mechanical engineering	
QD	Chemistry		TK	Electrical engineering: Nuclear	
QE	Geology		TL	Motor vehicles. Aeronautics.	
QH	Natural history		TN	Mining engineering.	
QK	Botany			Metallurgy	
QL	Zoology		TP	Chemical technology	
QM	Human anatomy		TR	Photography	
QP	Physiology		TS	Manufactures	
QR	Bacteriology	5th Tier	TT	Handicrafts Arts and crafts	
			TX	Home economics	
R	MEDICINE	5th Tier	U	MILITARY SCIENCE	5th Tier
S	AGRICULTURE		V	NAVAL SCIENCE	5th Tier
SB	Plant culture and horticulture		Z	BIBLIOGRAPHY AND LIBRARY SCIENCE	5th Tier
SD	Forestry				
SF	Animal culture				
SH	Fish culture and fisheries				
SK	Hunting sports	5th Tier			
T	TECHNOLOGY			Government and International Documents	Basement
TA	General engineering			Reference	2nd tier
TC	Hydraulic engineering			Current periodicals and newspapers	2nd tier
TD	Sanitary and municipal			Matzke Collection	3rd tier
TE	Highway engineering			Ruskin Collection	2nd tier
TF	Railroad engineering				

*A few M books are kept in the main library; most are in Drinker Hall.

** Location of Q (Science) books is determined by the caption above the call number. Q books kept in the main library have "Main Library" above the call number on catalog card. These books are on the 5th tier. Biology laboratory Q books are in Sharpless; Observatory Q books are in the Observatory; Engineering Q books are in Hilles; all other Q books are in Spokes Library.

FLOOR PLANS The Magill Library has six levels; basement, 1st tier, 2nd tier (where circulation desk, catalog, periodicals room, reference section, and main reading room are), 3rd tier, 4th tier and (on older or north side of the building only) 5th tier. Maps of the various areas are installed near the stairways on each tier. These maps show the location of books and special rooms. If at any time you need information about these matters, do not hesitate to inquire at the circulation desk or reference desk. Staff members will be glad to help you.



PECIAL ROOMS AND WORK AREAS Gummere-Morley Room (1st tier), a browsing room commemorating Professors F. B. Gummere and Frank Morley, Sr. (Smoking permitted)

Microforms Room (2nd tier), equipped with microfilms, microfiche, microcards and readers.

Rufus M. Jones Study (2nd tier), a replica of Rufus Jones' study, with some of his books and furniture.

The Quaker Collection (2nd tier) is housed in a suite of rooms. The new Barton Wing includes the vault below the main floor and the Harvey Peace Research Room on the balcony. The Quaker Collection contains 25,000 volumes, the Rufus M. Jones

Mysticism Collection, 100,000 manuscripts, a collection of microform materials with readers, and other material. All of the manuscripts, including the Charles Roberts Autograph Letters Collection, and all of the rare books of the Library are housed in the vault in this area. The Quaker Collection, Borton Wing, and Harvey Room are not undergraduate reading areas.

The Collinson/Fothergill Library (2nd tier, Philips Wing), is the name given to the college's collection of pre-nineteenth-century imprints. A great number of books in the collection are primary sources--sources more profitably used in the pursuit of original research than in the composition of survey papers.

These books, mostly eighteenth-century items, form a commemorative collection--honoring two British Quaker scholars, associates of Benjamin Franklin and patrons of American libraries. The one, Peter Collinson, was the eighteenth-century British botanist who gave books, advice, and energies to the budding libraries of Pennsylvania, among them the Friends' Library of Philadelphia (now in Haverford's custody); the other, Dr. John Fothergill, one of Britain's great physicians in the eighteenth century, patronized several literary projects, aided the fledgling medical schools in the colonies, authored several volumes and, like Collinson, was active in the Royal Society.

The Christopher Morley Alcove (2nd tier), at the east end of the building, serves as a browsing area and contains exhibits and collections of Christopher Morley's writings.

The Sharpless Gallery (2nd tier), named in honor of Isaac Sharpless, president of Haverford College, 1887-1917, and furnished by the Class of 1917, is a public gallery where many of the college's paintings are hung, and exhibits are displayed.

The Hires Room (1st tier), named for Harrison Hires, Class of 1910, and Mrs. Hires, is an audio room where discs and tapes can be heard. This room is to be used primarily for listening to recordings of the spoken word.

The Strawbridge Seminar Room (1st tier), is used for seminars and committee meetings. (Smoking permitted)

The C. C. Morris Cricket Library and Collection (2nd tier, off the Philips Wing), named in honor of an inter-

*Initial "D" (opposite).
George Heinrich Paritius.
From an alphabet designed
in 1710 by the south-
German writing-master
(reduced).*

nationally famous cricketer and a member of the Class of 1904, houses material illustrating the history of American cricket with special emphasis on the sport at Haverford College and in the Philadelphia area. This room is not open for general undergraduate use.

The Crawford Mezzanine (2nd tier), in the South Wing provides writing and study tables for forty-four students. It is named for Alfred R. Crawford, Class of 1931, vice-president of Haverford College, 1964-1966.

There is a reading area at the end of the South Wing (2nd tier), the gift of the Class of 1942, with additional study tables and easy chairs; also a lounge area on the 4th tier near the elevator.



DEPARTMENTAL LIBRARIES Use of these departmental libraries is restricted to Haverford and Bryn Mawr College faculty and students. Anybody else wishing to borrow a book from a departmental library must apply to the circulation desk in the main library and use the book there. If he is not a member of the College, he should request the book 24 hours in advance of the time it is needed.

Bound volumes of periodicals may be charged out of a departmental library only by a member of the faculty and only for use within the building where the departmental library is located (or for use at the secretarial office for copying purposes). Current issues may not be charged out.

With the exceptions noted above, rules governing the use of departmental libraries are the same as those applicable to the main library.

Carrels in the Stokes Science Library and the Biology departmental library in Sharpless are assigned on a seniority basis to science majors. Books charged for use in carrels may not be taken from the library rooms.

Smoking is not permitted in any departmental library.

All science libraries are administered by the Stokes Hall Librarian, whose office is adjacent to the Stokes Library. Any questions regarding them should be addressed to her.

To borrow a scientific publication through Interlibrary Loan, see or call the Stokes Hall Librarian (Extension 269).

NEWSPAPERS AND PERIODICALS The Library receives several daily English-language newspapers as well as a number of daily and weekly foreign papers. These are kept in the Periodicals Room on the main floor (2nd tier). The New York Times, Philadelphia Inquirer, Christian Science Monitor, Wall Street Journal, London Times and Washington Post are received daily and the Philadelphia Sunday Bulletin is also taken. Foreign weeklies received include The German Tribune (in English), London Times Literary Supplement and Manchester Guardian Weekly. All newspapers are kept for at least one month before being discarded.

The New York Times is available on microfilm back to 1851, the current microfilms being received about two weeks later than the paper. The films and microfilm readers are in the Microforms Room (2nd tier) and the New York Times Index is shelved nearby in the Reference area. The Library also has films of the Philadelphia

Public Ledger from 1836 through 1929. Back numbers of other Philadelphia newspapers are available on film at the Free Library of Philadelphia.

Foreign-language newspapers received by the Library include: L'Express (Paris), Literaturnia Gazeta (Moscow), Le Monde (Paris), Pravda (Moscow), and Die Zeit (Hamburg); the edition received is printed in New York).

Most current periodicals not sent to departmental libraries are kept alphabetically by title in the Periodicals Room. These issues may not be removed from this area. The Reader's Guide and Social Sciences and Humanities Index are also kept in this room.

Quaker periodicals are kept in the Treasure Room.

An alphabetical file of titles and call numbers of all periodicals received currently will be found on the New Book shelves. In the drawers marked "Periodicals" in the Card Catalog is an alphabetical file of titles of all periodicals received currently. (Periodicals which the Library no longer receives or which have been discontinued are listed alphabetically elsewhere in the Card Catalog.) Each card shows the library's exact holdings and gives the accession number of each bound volume.

Bound periodicals may be charged out only by members of the Haverford faculty. Current issues may not be charged out by anyone.

The Union List of Serials and New Serial Titles are useful in verifying information about periodicals and in locating those not available at Haverford. These are kept in the Catalog Room.



IRCULATION DEPARTMENT All books to be taken out of the Library building must be charged at the circulation desk. Use the manila cards (bearing numbered tabs) found there. The accession number found at the bottom of the book-plate, should be written in the

upper left corner of the card; then the borrower's name and campus address. Finally the name of the author and title of the book borrowed should be added.

The loan period is one semester, but any book may be recalled after a month, if needed by someone else. Current fiction may be recalled within two weeks. The desk attendant will stamp the due-date in the front of each book charged. There is always at least one attendant on duty at the desk. If the attendant is busy in the

Initial "C." Daniel T. Ames. From an alphabet designed by the New-Yorker in 1879 (reduced).

Reserve room, borrowers are requested to ring the bell and wait for the attendant to check out their books.

A book in circulation may be reserved by giving the desk attendant the accession number of the book and asking to have it held. The person requesting the book will be notified when the book has been returned.

To return a book which has been charged out, simply place it in the slot at the circulation desk. When the Library is closed, the book slot at the entrance is to be used for the return of books.

Books kept in carrels must be charged at the circulation desk on green cards labelled for carrel use, carrel number to be given instead of campus address. A long green slip with space for carrel number at the top is to be placed in each book. Any book without this slip will be removed from the carrel.

BOOKS ON RESERVE Reserve books may be borrowed for two hours only, unless an instructor has specified a longer period. They must be used in the Library building. If they are not returned on time the borrower will be fined. If nobody else needs the books, however, they may be borrowed for another hour.

Reserve books taken out overnight are due back at 9:45 a.m., and the borrower will be fined if they are not returned promptly.

CHECK OUT AT LIBRARY ENTRANCE The Library has suffered serious losses of books, periodicals, and bound volumes of periodicals in recent years, and has decided to institute a check out system at the door.

All persons leaving the library--faculty, students and visitors--will be asked to show their books to the checker, and will be asked to open briefcases, bags or other containers.

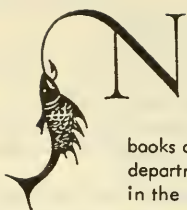
We regret that it is necessary to create this new procedure, but feel that this is the only way in which we can protect the library collections, keep a record of where material is at all times, and guarantee that books, periodicals and other sources will be on the shelves when needed.

PHOTOCOPYING A coin-operated machine has been installed in the Periodical Reading Room, on the second tier. The cost is 10 cents a page. Please go to the circulation desk if the machine fails to operate properly.

INTERLIBRARY LOAN AND USE OF OTHER LIBRARIES When there is a need for a book not owned by the Haverford Library, apply at the reference desk for an interlibrary loan form; if the work desired is one on a scientific subject, however, apply to the Science Librarian in Stokes. The Librarian will in most cases be able to borrow the book from another library for use under the terms and time limit stated by the lending library.

Haverford College students are permitted to use the Bryn Mawr and Swarthmore College Libraries upon the presentation of their identification card. They must carry such a card with them. The University of Pennsylvania requires a special card which may be obtained from the Reference Librarian. The University of Pennsylvania requires a new card each month. When using the library of another college, Haverford students are expected to acquaint themselves with the regulations of that library and abide by them strictly.

REFERENCE DESK This is at the west end of the reference area. The staff member at this desk will help you with bibliographical problems. Do not hesitate to ask her (or the attendant at the circulation desk) for help.



NEW BOOKS New books are put on display every Thursday in the book case in front of the circulation desk. These books may be reserved for the following Monday and may be picked up at the circulation desk after 2 p.m. New

books on science are sent directly to the appropriate departmental libraries after being on the display shelves in the main library from Thursday until Monday. They may not be reserved.

A monthly list of accessions by the Haverford and Swarthmore libraries is deposited on the New Books shelves in front of the circulation desk.

CARRELS Student carrels are located on all tiers except the 5th. To reserve a carrel, inquire at the circulation desk. Typing carrels are on the 1st and 4th tiers (old stacks). Lockers where typewriters may be kept are on the 1st tier. To obtain the combination of one of these lockers, inquire at the reference desk.

Enclosed carrels on the 1st and 4th tiers are reserved for faculty.

TELEPHONES Two pay phones are available on the 1st tier, near the front stair door.

LIBRARY RULES The construction of the Magill Library and renovation of the older structure were made possible by the generosity of many Haverford graduates and friends. Users of the building are expected to treat the furnishings and equipment with appropriate care. We want to make this building and the Library services as convenient and efficient as possible. In turn we require that readers observe some simple rules which are necessary to assure proper maintenance, safety, and comfort.

Smoking. Permitted only in the Strawbridge Seminar Room and Gummere-Morley Room, on the 1st tier.

Food and drink. Do not bring food or drinks into the building.

Animals. Please do not bring animals into the building.

Posters. Not allowed except in the display case at the door and the board opposite the 2nd tier elevator.

Coats and umbrellas. These should be left in the racks and umbrella stands provided.

Doors and windows must not be propped open.

*Initial "N." Eric
Gill. Wood-engraving
for Luke v. 3-7 from
The Four Gospels.
(1931) reduced.*

Typing. Carrels where typewriters may be used are located on the south side of the old stacks, 1st and 4th tiers.

"Abeunt studia in mores": Library books are not to be marked, torn, defaced, or damaged in any way. Readers must observe silence in the Library and must cooperate in maintaining an atmosphere conducive to undisturbed study. They are responsible for proper care of Library tables and chairs as well as books. Imitation of Machiavelli's custom of donning his best clothes before spending the evening in the company of ancient authors is not required, but readers are expected to observe conventional standards of dress and decorum at all times and for all authors.

Fines. All books must be returned by the last day of the semester. A fine of \$.25 a day per book is charged for books returned late to the circulation desk.

The Library reserves the right to call in any book at any time, even before it is due.

A fine of \$.25 a day is charged for books not returned promptly in response to an "emergency recall."

A special schedule of fines applying to reserve books overdue is posted on the library bulletin board near the Reserve desk.

All student fines remaining unpaid at the end of November and at the end of the second semester will be doubled and charged against the student's account.

The Library has an obligation to make every effort to regain books which have not been returned by readers. In a very real sense the library belongs to future generations of students as much as to current ones. May we gently remind you that there are even legal steps which may be called upon in a last resort. This information may be consulted at the Reference Librarian's desk.

Lost books. Lost books should be reported immediately. From the date of their being reported lost, no more overdue fines will accumulate. The borrower is responsible however for payment of the cost of the book and processing it. (If one volume of a set is lost and cannot be replaced, the whole set must be paid for.)

